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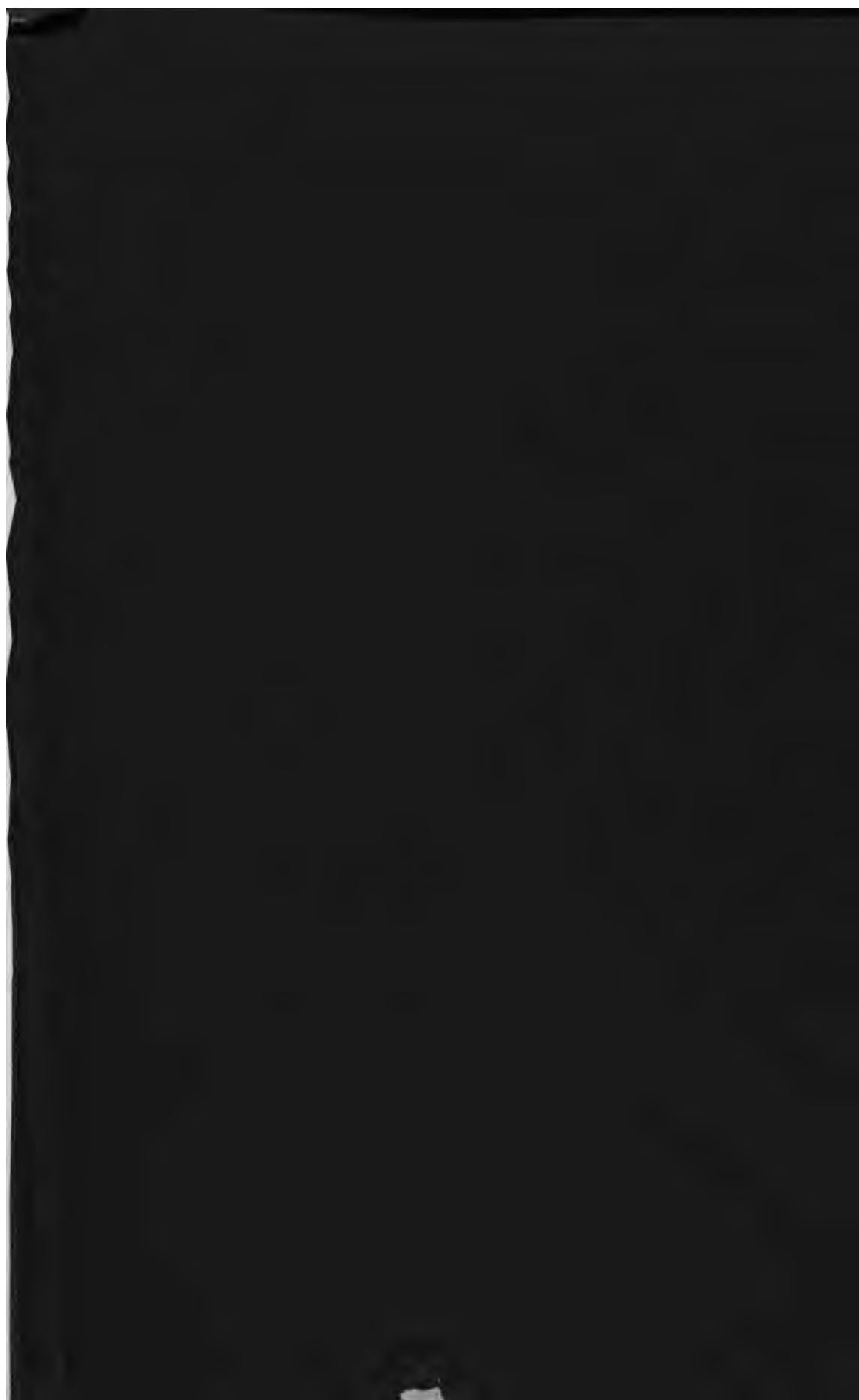
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GUIDE

TO THE

MINING LAWS OF THE WORLD

BY

OSWALD WALMESLEY

OF LINCOLN'S INN, BARRISTER-AT-LAW

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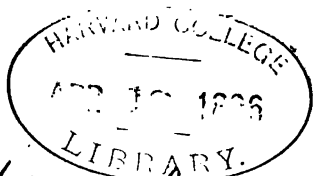
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P R E F A C E.

A LOVE for mining enterprise seems to be associated with the English language, as in nearly every part of the world where mining is carried on Englishmen, or English-speaking Americans, are to be found taking an active part in the work as mining engineers or otherwise, whilst a still larger number at home or abroad are interested financially in mining undertakings or concessions. To such persons it must often be a matter of importance as well as of interest to have an opportunity of inquiring for themselves into the laws regulating the acquisition, holding, or carrying-on of their undertakings or concessions. It is therefore somewhat strange that, although one or two authors have glanced at the subject, no work appears to have been hitherto published in the English language dealing comprehensively with the mining laws of different countries. Some information in relation to such laws has been recently supplied in the "Reports of Her Majesty's Representatives abroad on Mining Rents and Royalties and the Laws relating thereto," published as a Blue-book in 1887 (Commercial No. 7), which were obtained by the Government at the request of Mr. Stanhope, M.P., and further information was furnished in the reports of the Royal Commission on Mining Royalties, which was appointed in 1889, and which has recently issued its final report, and to which Commission some of the following notes were rendered as evidence.

The purposes for which the Blue-book was obtained, and the Commission was appointed, however, were limited, and did not admit of the subject being then dealt with in a manner at all proportionate to its vast and complicated nature. It could not indeed be dealt with here in complete detail within a reasonable space; but I have endeavoured in the following pages to supply a sort of index at least to the mining laws of the chief countries of the world, and to furnish an abstract or analysis of the law relating to mines in each particular country in which the mining industry is of any positive importance. Thus, whilst I trust that these notes will not be found altogether unworthy of the notice of my own profession, I may say that they have been principally designed as a guide to persons who may be engaged in or proceeding to take part in mining enterprises in foreign countries and the colonies, or who, for other reasons, wish to enquire for themselves into the laws relating to concessions of mines, and other mining undertakings abroad. Incidentally I have endeavoured to assist in the study of what must undoubtedly prove an interesting subject to the student of comparative jurisprudence, and with this view I have endeavoured to supply complete and accurate materials for the purpose, and to frame the abstracts of laws in such a shape as will permit of their sub-divisions being conveniently compared with each other.

In the preparation of the following notes, I have been greatly assisted by Mr. Thomas Emerson Forster, mining engineer, of Newcastle-on-Tyne, who has collected on the spot much of the information contained in them, relating to the Australasian Colonies, and whose considerable experience of colonial mining has qualified him to collect and to assist me in arranging,

in a suitable manner, such of the information at my command as is likely to be of practical use to readers of these pages.

I also desire to express my grateful acknowledgment of the great kindness shown to me by numerous gentlemen officially or practically connected with mining matters in different countries, who have generously assisted me by furnishing information or revising portions of the following pages; and I can only regret that, having regard to the manner in which they are scattered over the world, time does not permit of my communicating with them all for the purpose of obtaining permission to mention their names in making this acknowledgment.

It remains to add that, in attempting to analyse the mass of mining legislation existing in the various countries dealt with, it is hardly possible that all errors or inaccuracies should have been avoided. It can only be said that every possible effort has been made to ensure complete accuracy, and it is at least trusted that the errors which may be found to have occurred will be few in number and unimportant. Any notification of an error or inaccuracy would, however, be gladly received by me, with the view to possible correction at some future time.

Much of the information given in the following notes has been collected from the French and Belgian text-writers, whose names and works (referred to by abbreviations as below) are as follows, viz. :—

DUPONT.—Cours de Législation des Mines, par M. Etienne Dupont, Inspecteur Général des Mines et Professeur à l'Ecole des Mines, Paris.

F.-G.—Code des Mines et Mineurs, par L. J. D. Féraud-Giraud, conseiller à la Cour de Cassation, Paris.

Ag.—Législation des Mines Française et Etrangère, par
Louis Aguillon, Ingénieur en Chef des Mines,
Professeur de Législation à l'Ecole Nationale
Supérieure des Mines, Paris.

W. & H.—Code de l'Industrie et des Mines, par Camille
Williquet, avocat. etc., et Herman Hubert, Ingénieur
des Mines, Belgium.

(3) VUILL.—Nouvelle Carte des Bassins Houillers Du Nord
et du Pas-de-Calais, par E. Vuillemin.

The "Blue-book" which is occasionally referred to in these
notes is the book containing the "Reports of
H.M. Representatives abroad on Mining Rents
and Royalties and the Laws relating thereto"
(1887, Commercial No. 7).

O. W.

LINCOLN'S INN, 1894.

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A GUIDE TO THE MINING LAWS OF THE WORLD.

CHAPTER I.

INTRODUCTION.

AN important consideration in dealing with this subject has been the method in which it should properly be divided; and, although an alphabetical division following the names of the countries dealt with suggests itself as appropriate, it has been determined rather to divide it in the way in which the subject has naturally presented itself, starting from England, which on account of her great mineral production and the influence which her legislation has exercised over the legislation of other countries, appears entitled to take the first place, and passing on to other important mineral-producing countries in the order to some extent of their proximity to England, but having also regard to their comparative importance from the point of view of their mineral production, then dealing with India and the English Colonies and possessions (many of which, whilst following the law of the mother country as regards minerals in private lands, possess elaborate codes and regulations relative to mines of gold and silver or to other minerals in lands which still remain unappropriated by the Crown, or in lands from the original Crown grants of which the minerals have in one form or another been reserved) and concluding with references to two countries, China and Japan, which have but recently taken rank amongst the mineral-producing countries of the world, and particulars as to the legislation of which have been difficult to obtain.

A glance at the following pages will at once show that in nearly every country, except England, there exists a special and extensive mass of codified legislation on the subject of mining, differing as between the various countries, and often as between different portions of the same country, in detail and sometimes in principle. On careful examination, however, it will be found that

the differences in principle are more apparent than real, and that all the important legislations connect themselves more or less with certain principal types, which are themselves distinguished from one another by sufficiently distinct characteristics. These legislations have grown up by degrees in the different countries, being based in most cases upon *custom* supplemented by the written law ; but they have to a great extent been put into shape and expanded during the present century—a fact which is probably attributable in great measure to the immense development of mining enterprise which has followed upon the general adoption of steam-power and the establishment of railways. The principal types before referred to are, it seems to be generally admitted, capable of being reduced to three.

A.—The first of these is spoken of by French authors as the system of “*accession*,” under which (as in England, except as regards *royal mines*) the minerals accede to or go with the ownership of the surface.

B.—The second is called by French authors the “*domanial*” system, under which the mines belong to the State, with the right of working them itself, or of disposing of them to the highest bidder as it thinks proper. This system prevails in parts of Italy and in Luxemburg.

C.—The third system is called by French authors the “*regalien*” system, and is that system under which the State does not work the mines itself, or dispose of them to the highest bidder, but confers the privilege of working and also the property in the mines upon certain persons, who must deal with such mines under established regulations and pay a tax to the State. This is, in fact, the system of “*concession*,” which prevails in France and most of the other countries of the European continent. There are, however, various subdivisions of the last-mentioned system, depending upon the mode in which the concessions are granted.

1. AS REGARDS THE PERSON TO WHOM THEY ARE GRANTED—*e.g.*, the discoverer (as in Germany), the first applicant (as in Spain), at the discretion of the Government (as in France), or the owner of the surface having a right of preference (as in Belgium and parts of Italy).

2. AS REGARDS THE PERIOD FOR WHICH THE CONCESSIONS ARE GRANTED—*e.g.*, in perpetuity (as in France), or for terms of years (as in Turkey), or

3. AS REGARDS THE SUBSTANCES TO WHICH THE CONCESSIONS EXTEND—*e.g.*,

(a) To all the substances reserved from the ownership of

the soil within the area to which the concession extends (as in Spain and Austria), or

(b) *To the substance specified in the act of concession alone* (as in France and Germany).

And there are many other differences which may perhaps be considered rather as constituting differences of detail than of principle.

The differences which are admittedly only differences of detail are also very numerous and important.

It is proposed in the following notes to set out under separate headings the principal distinctive features of the different legislations, so far as they are likely to be of use or interest in considering the points which come within the scope of the present inquiry, precluding the notes with reference to the existing legislation of each country, wherever the materials for such a purpose are available, with a short sketch of the HISTORY OF THE LAW AS TO MINING in such country.

It is then proposed to give (in tabulated form where possible) particulars of THE MODE IN WHICH MINERAL SUBSTANCES ARE CLASSIFIED in each country, showing in whom the ownership of each class is vested, and to whom royalty taxes or royalties or other impositions in the nature of rent (if any) are payable in respect of each class. From these tables it will be amply apparent that the substances which lie beneath the soil are not on the Continent, as in England, all usually subject to the same ownership or incidents of ownership, but are divided with respect to ownership in a great variety of ways, both as regards the heads of division and as regards the mode in which the various substances are allotted under such heads.

The subject of SEARCHES FOR MINES is next proposed to be dealt with, and in this respect again it will be seen that there is great difference between the different systems; in some cases (as in Germany) the right of search being open to everyone who will indemnify the surface-owner against damage; in other cases (as in France and Belgium) no one except the owner of the surface being allowed to make the searches, without the consent of such owner or the authority of the mining administration; and in other cases (as in Austria-Hungary) not even the owner of the surface being allowed to search for the mines, which are reserved from the ownership of the soil, without the permission of the mining authority. There are many further differences as to the conditions on which searches may be made.

It is then proposed to describe, in respect of each country in which the system of concession obtains, THE MODE IN WHICH

AND THE PERSONS BY WHOM CONCESSIONS MAY BE OBTAINED, THE CONDITIONS ON WHICH THEY MAY BE OBTAINED, AND THE MODE IN WHICH THEY MAY BE WORKED UNDER, DEALT WITH, UNITED, DIVIDED, SURRENDERED, OR FORFEITED. It will be seen from the notes on this part of the subject that a concessionnaire of mines abroad who has obtained the necessary surface powers is in much the same position as an owner of land and minerals in England, being usually free to work the minerals for himself, or to sell them or to let them to third parties, as he pleases, subject to the general provisions of the law for Government supervision and inspection of the mines. Instances will be given illustrating the mode in which concessions are so dealt with. Most of these instances are taken from published particulars of English limited companies which have acquired concessions of mines abroad (it being found difficult to obtain many particulars as to *private* arrangements), but many of them have been supplied by parties who have been actually interested in the dealings specified.

THE MODE IN WHICH AND THE CONDITIONS UNDER WHICH THE RIGHT TO EASEMENTS OF WAY OR WATER OR VENTILATION, BOTH INSIDE AND OUTSIDE THE AREAS OF THE CONCESSIONS, CAN BE ACQUIRED will then be noticed. Particulars will then be given with respect to each country of the provisions of the law with respect to INSPECTION AND REGULATION OF MINES; and of the arrangements which are usually made, whether compulsorily or otherwise, for the RELIEF OF WORKMEN in case of accidents, &c.

Some slight description of the CONSTITUTION OF THE MINING AUTHORITY OR ADMINISTRATION in countries where such an administration exists will also be given, and GENERAL OBSERVATIONS will be offered, where they appear to be called for, with reference to the systems existing in the different countries, though but little will be attempted in the way of comment, the object of these notes being rather to explore than to develop buried treasures, so as to provide a slight but accurate sketch of the actual mining legislation of the world, free from the expression of any personal views on the part of the writer.

CHAPTER II.

GREAT BRITAIN.

NOTES AS TO MINING LAW.

ENGLAND.

UNLIKE many other nations of far less importance from the point of view of their mineral production, England has never attempted to codify her mining legislation except in one respect.¹ There are indeed in force several Acts of Parliament relative to mining in particular districts of the country, such as the Acts relating to the Stannaries Courts, having jurisdiction in the Counties of Cornwall and Devon, those relating to the mines of coal and iron in the Hundred of St. Briavels, in the County of Gloucester, commonly known as the Forest of Dean, and those relating to the mines of lead ore in the Peak Forest district of Derbyshire (short particulars of which will be given later on), whilst there are many Acts of Parliament containing sections with special reference to minerals, such as The Highway Act, 1835,² The Copyhold Acts,³ The Railways Clauses Consolidation Act, 1845,⁴ The Waterworks Clauses Act,⁵ the Acts relating to Larceny⁶ and Malicious Injuries to Property,⁷ The Public Health Acts,⁸ The Settled Estates Act,⁹ The Conveyancing Acts,¹⁰ The Settled Land Acts, 1882 to 1890,¹¹ and other Acts; but there is no such general statutory legislation dealing with the whole subject of mining in England as is frequently to be found in foreign countries; hence there exists this curious contrast, that, whilst a small province within a State, like Lucca in Italy, which can only boast of one mine of silver lead and one of lignite, possesses an elaborate mining code, divided into 115 articles, designed to provide for almost every imaginable question that could arise relative to mining, England, with her annual production of nearly 200,000,000 tons of coal and huge quantities of other minerals,

¹ The exception referred to is the legislation relative to the regulation and inspection of mines contained in the Coal Mines Regulation Act, 1887 (50 & 51 Vict. c. 58) and The Metalliferous Mines Regulation Act, 1872 (35 & 36 Vict. c. 77).

² 5 & 6 Will. IV. c. 50, s. 82.

³ 4 & 5 Vict. c. 35, s. 84; 15 & 16 Vict. c. 51, s. 48; and 21 & 22 Vict. c. 94, s. 14.

⁴ 8 & 9 Vict. c. 20, ss. 77-85.

⁵ 10 & 11 Vict. c. 17, ss. 18-27.

⁶ 24 & 25 Vict. c. 96, s. 38.

⁷ 24 & 25 Vict. c. 97, ss. 26-28.

⁸ 38 & 39 Vict. c. 55, s. 334, and 46 & 47 Vict. c. 37. ⁹ 40 & 41 Vict. c. 18, s. 4.

¹⁰ 44 & 45 Vict. c. 41, ss. 2, 14, and 65, and 55 & 56 Vict. c. 13, s. 2.

¹¹ 45 & 46 Vict. c. 38, ss. 2, 17, and 21, and 53 & 54 Vict. c. 69, s. 8.

has but little statutory legislation on the subject beyond that which relates to the regulation and inspection of mines.¹ In the absence of general statutory legislation on the subject, the legal questions governing the ownership and working of mines and minerals in England have been determined by decisions of the Courts based upon the general principles of the common law and on local customs. The main feature of the English law as to mines has, from time immemorial, been the *prima facie* right of the owner of the surface to everything beneath it, except "Royal Mines," which were held to belong to the Crown, by reason of the Royal Prerogative, on account of the special excellence of the thing, and to assist the Crown with funds for the defence of the country and for the supply of coinage. These "Royal Mines" are mines of gold and silver, all other mines being known by contradistinction as "base mines." At one time the Crown also claimed as "Royal Mines" any mines of copper, tin, iron, and lead, with which gold and silver were found to be intermixed, and this claim was supported by the legal decision in "The Case of Mines," decided in the reign of Queen Elizabeth in the year 1568, and reported by Plowden; it was, however, abrogated by two statutes passed in the reign of William and Mary (1 W. and M. c. 30, and 5 W. and M. c. 6) for the express purpose of encouraging the working of mines, though the Crown retained a right of pre-emption with respect to such mines at certain rates which would by no means be considered nominal even at the present time.² To the *prima facie* right before referred to there are, however, some apparent exceptions in cases where the ownership of the surface and the minerals, or any of them, has originally been kept separate, or has by any means become severed. As a general rule the owner of minerals in England is free to deal with them as he pleases so long as he does not injure anyone else; and the nature and extent of the rights and powers of different classes of owners, the mode of exercising such powers, the local rights and customs

¹ A writer has recently observed rather humorously on the system of mining law prevailing in South America, as compared with the English system, that in South America "the cart is always placed before the horse. All the laws in this Republic are to be found in codes, and thus it has been customary to provide a code of mining laws to meet cases which have not as yet arisen in practice, or which, probably, may never arise, resulting in much confusion and impediment to a proper development of the mines, at least according to the system of engineering known and practised in Europe." (Extract from "Notes upon the Mines in the Argentine Republic, South America," by H. D. Hoskold. Transactions Fed. Inst. Mining Engineers, vol. 3, part 4, p. 418.)

² These prices were: For *copper* ore, £16 per ton; for *tin* ore, 40s. per ton; for *iron* ore, 40s. per ton; and for *lead* ore, £9 per ton. An Act passed in 1815 (55 Geo. III. c. 134) increased the rate to be paid by the Crown for the right of pre-emption of *lead* ore from £9 to £25 per ton.

of different mining districts, the rights and liabilities of and the relations between the different parties owning, working, or otherwise associated with the mineral production of the country, are matters which have given rise to much judicial inquiry, and which have, by degrees, become well defined and established. It would, however, be beyond the scope of these notes, which have been designed to deal with written laws and regulations specially enacted in various countries with reference to mining, to endeavour to trace out the application to questions relative to mining of the general principles of the law in England as has already been fully done by far more competent authors; and the reader who is desirous of studying such matters is referred, for the purpose, to the following standard works on the subject, viz.:—

PETTUS (Sir John). *FODINÆ REGALES*; or, the History, Laws, and Places of the Chief Mines and Mineral Works in England, Wales, and the English Pale in Ireland; as also of the Mint and Money. (Lond. 1670.)

ROGERS (Arundel). *THE LAW RELATING TO MINES, MINERALS, AND QUARRIES* in Great Britain and Ireland: including rights of the Crown, the Duchy of Cornwall, and local laws and customs; with a summary of the laws of Foreign States, and practical directions for obtaining Government grants to work Foreign Mines. Second Edition. (Lond. 1876.)

BAINBRIDGE (William). *TREATISE ON THE LAW OF MINES AND MINERALS*. Fourth Edition, by Archibald Brown. (Lond. 1878.)

MACSWINNEY (R. F.). *THE LAW OF MINES, QUARRIES, AND MINERALS*. (Lond. 1884.)

FOWLER AND LEWIS. *THE LAW OF COLLIERIES: A Handbook of the Law and Leading Cases*. Fourth Edition. (Lond. 1884.)

PEACE. *The Coal Mines Regulation Act, 1887, and the Truck Acts, 1831 and 1887*. (Lond. 1888.)

For practical details as to the customs of particular districts respecting the terms and conditions upon which mines are usually dealt with in different parts of this country, the reader is referred to the first Report of the Royal Commission on Mining Royalties before referred to [1890 C—6195], where full particulars on the subject are set out in a statement (in tabulated form), prepared and given in evidence by the writer of these notes [App. B 6 to the last-mentioned Report]; and much other useful and interesting information with reference to mining rights and customs of the country is to be found in the four Reports of Evidence and the final Report published by the same Commission.

The following short analysis of the effect of the Acts of Parliament which have established and defined the special customs of certain mining districts of England may not seem out of place here, presenting, as these customs do, many features in common

with systems of legislation followed in foreign countries. How far this similarity results from the effect of English customs upon foreign law or the converse is a question which, though interesting, it would be irrelevant to consider here; but it cannot fail to be noticed that the special features of the rights of the Derbyshire "finder" of lead under the control of his Bar-master (or Berg-meister) seem to be as closely connected with the old German "common mining right" as does the modern system of "Mining Courts" under the direction of "Wardens" and other officials in our Colonies appear to be allied with the system of the "Stannaries Courts" established from ancient times in the Counties of Cornwall and Devon.

The Stannaries.

The appellation of "The Stannaries" (from the Latin *Stannum*, tin) appears to have been in early times applied to certain districts in the Counties of Cornwall and Devon, over which the Crown claimed rights as part of the Royal Demesnes, subject to customary rights enjoyed by the workers of tin; these Royal rights were granted by Edward III. to the Black Prince as Duke of Cornwall, and have since passed with that title to the Prince of Wales for the time being.

Royal charters (which are said to have been merely confirmatory of rights previously enjoyed) were granted for the benefit of the tanners in the Stannaries of Cornwall and Devon in the reign of Edward I., which charters were afterwards to some extent explained by Parliament in the reign of Edward III., whereby such tanners were exempted from certain tolls and customs, and were rendered liable to sue and be sued only in the local Stannaries Courts, except as regards questions affecting land, life, or limb.

In the sixteenth year of Charles I. (A.D. 1640) an Act¹ was passed defining, and to some extent restricting the jurisdiction of the Stannaries Courts, and empowering the tanners to sue *foreigners* (i.e. persons outside the district) at common law.

By an Act passed in the year 1836 (6 & 7 Will. IV. c. 106), the Courts exercising equitable and common law jurisdiction respectively in the Stannaries of Cornwall were consolidated, and the jurisdiction extended to all cases connected with any mine worked for lead, copper, or any other mineral. The Court was declared to have jurisdiction throughout the County of Cornwall, and to be a Court of Record. The expenses of the Court were provided for partly by fees and partly by an assessment of $\frac{1}{4}d.$ in the £ on all metals and metallic ore, except tin (which exemption was removed by a subsequent Act, 2 & 3 Vict. c. 58), sold in or drawn from any mine in the County of Cornwall.

¹ 16 Chas. I. c. 15.

In the year 1855, by the Act 18 & 19 Vict. c. 32, the jurisdiction of the Court was extended to mines in which metallic and non-metallic minerals were intermixed, and facilities were given for proceedings in suits by agents or pursers against non-resident shareholders for contribution and in other proceedings against *foreigners*, and various powers were conferred on the Court, but it was provided that nothing contained in the Act was to authorise the Court to adjudicate on any claim touching the freehold and inheritance of any person except by consent of the parties, though the Court was empowered to entertain suits for the recovery of mines within the Stannaries and of the buildings, machinery, works, and waters occupied therewith in case of expiration or forfeiture of setts or leases, and also to prohibit the working of any mine in a manner contrary to custom or covenant by injunction. Provision was also made for the removal of cases commenced in the County Court within the Stannaries to the Vice-Warden's Court, which might relate to the usage or custom of mining or of miners, or the principles or incidents of cost-book partnership, or of cost-book mines and other matters specially connected with mining. A limit was placed upon the time within which objections could be taken to jurisdiction. Power was given to the Court, with the consent of the parties, to refer any case to arbitration, and the Vice-Warden was empowered to hold his Court at any place within the Stannaries. The Vice-Warden was also empowered to make new rules or orders, and to adopt the rules, orders, and practice of the Superior Courts of Law and Equity. By this Act the jurisdiction of the Court of the Vice-Warden was also extended to the County of Devon, and arrangements were made for sittings and, later on, for a separate Court in that county, and provision was made for an assessment on the produce of mines in that county similar to that which had been previously authorised with respect to the produce of mines in Cornwall.

An Act passed in 1869 (32 & 33 Vict. c. 19) regulates the carrying-on and winding-up of mining partnerships or Companies (other than Companies registered under any of the Joint Stock Companies Acts) within the Stannaries, and in some respects increases the powers of the Stannaries Court, especially with reference to proceedings in respect of the liquidation of Companies under the Court. Even as regards the winding-up of Joint Stock Companies, the Stannaries Court had jurisdiction under the Companies Act, 1862,¹ s. 81 (now repealed) in the case of Companies actually *engaged in* working mines within the jurisdiction of the Stannaries. Under the Stannaries Act, 1887,² s. 28, the jurisdic-

¹ 25 & 26 Vict. c. 89.

² 50 & 51 Vict. c. 43.

tion was extended to the case of Companies *formed* for working mines within the Stannaries (unless shown to be working mines or engaged in any undertaking beyond the limits of the Stannaries), and a similar provision is contained in the Companies (Winding-up) Act, 1890,¹ s. 1, sub-s. 4, and by s. 4 of the same Act power is given for the Judge to refer any question in winding-up proceedings from the Stannaries Court to the High Court in the form of a special case.

By the Judicature Act, 1873,² s. 4, the power of the Lord Warden of the Stannaries Court, assisted by assessors, to hear appeals from that Court, was transferred to the Court of Appeal established by that Act.

Under the County Courts Act, 1888,³ s. 177, County Courts may be held in the Stannaries, but are not to exercise jurisdiction in any case to which the equitable jurisdiction of the Stannaries Court extends.

By "The Stannaries Act, 1887," which only extends to metalliferous mines and tin streaming works within the Stannaries of Cornwall and Devon, miners are declared to have a first charge in relation to the mine at which they have been employed for wages in arrears not exceeding an amount equal to three months' wages upon the mine or its assets, as against any other creditors or persons, and powers are given to enforce such priority (ss. 4-10), and other special provisions are made with respect to payment of mines, wages, and club funds, the appointment of checkweighers and the sampling of minerals sent to the surface and otherwise for the benefit of miners; and it is provided that disputes between miners and officials of mines, to an extent not exceeding £25, may be dealt with by a Court of Summary Jurisdiction (ss. 11-18). All mortgages of mining plant and effects must be registered, and copies of all leases, grants, and licenses, and of assignments or contracts for the sale thereof, must be filed at the office of the Registrar of the Stannaries Court (ss. 19-20), and further provisions are made for the carrying-on of Companies within the Stannaries, and for the conduct of the Court.

Dean Forest.

The origin and extent of the rights of the "free miners" in respect of the mines of coal and iron belonging to the Crown⁴ within Dean Forest and other portions of the Hundred of St. Briavels, in the County of Gloucester, and the system established from ancient times

History of
Mining Law.

¹ 53 & 54 Vict. c. 63.

² 36 & 37 Vict. c. 66.

³ 51 & 52 Vict. c. 43.

⁴ The Crown property in these mines is now vested in the Commissioners of Her Majesty's Woods, Forests, and Land Revenues, along with the rest of the Royal Demesnes, and the income is payable to the Consolidated Fund.

of dealing with such mines received full inquiry at the hands of Commissioners appointed in the year 1831 by Act of Parliament (1 & 2 Will. IV. c. 12) passed for the express purpose of ascertaining the boundaries of the Forest of Dean, and for inquiring into the existence, origin, and particulars of the rights and privileges of the free miners within the Hundred of St. Briavels. The Commissioners made several reports which resulted in the passing of an Act of Parliament in 1838 (1 & 2 Vict. c. 43) whereby the rights and privileges of the free miners were established and defined, being at the same time revised and regulated so as to be made applicable to the working of deep coal within the Hundred; and Commissioners were appointed for the purpose of ascertaining the persons then entitled to the different gales, or workings, of coal and iron within the Hundred, and the situations and boundaries of their works.

The Commissioners were also authorised to make general rules specifying the terms upon which future gales should be held and worked. The Commissioners accordingly made awards in the year 1841 as authorised by the Act. The Act of 1838 was to some extent explained and amended by an Act passed in 1861 (24 & 25 Vict. c. 40), and by another that passed in 1871 (34 & 35 Vict. c. 85), and various Acts as to Crown lands, as well as other Acts, contain provisions affecting the Forest. From these Acts, and the other documents before referred to, the following brief summary of the special law as to minerals in the Forest of Dean has been prepared, following to some extent the plan on which it is proposed, where possible, to analyse the laws of foreign countries; and any reader who is desirous of studying the subject in further detail is referred to the standard work on the subject by Mr. J. G. Wood, containing reprints of all the important statutes, awards, and public documents relating to the Forest and Hundred.¹

The Crown² is entitled to both soil, timber, trees and minerals in the Forest, subject to certain rights of common and other rights claimed over the same, and to the minerals in other parts of the Hundred of St. Briavels, except in certain cases where grants have been made to subjects,³ but subject to the rights of the "free miners" of the Hundred to open mines and quarries

¹ Wood's "Laws of Dean Forest and Hundred of St. Briavels, in the County of Gloucester." London, 1878.

² See note 4, p. 24.

³ Under section 68 of the Act of 1838 power was given to the owners of any of the enclosed lands within the Hundred to give notice, within six months from the passing of the Act, that the provisions of the Act were not to extend to their lands, in which case they were to be exempted from such provisions, and it is understood that the power referred to was exercised by various owners of enclosed lands within the Hundred, but outside the Forest boundaries.

in the open lands of the Forest, and to open mines in the other lands within the Hundred (except in churchyards, gardens, and orchards, and in certain enclosures made by the Crown, or in cases where the minerals have been granted to subjects), and to work the said mines and minerals according to certain usages and customs (Preamble to Mines Act of 1838).

The "free miners," as to mines of coal or iron ore and stone quarries, are all male persons born and abiding in the Hundred of St. Briavels who have or shall have attained twenty-one, and have worked for a year and a day in a coal or iron mine within the Hundred (*ib.* s. 14); and, as to stone quarries alone, who shall have worked for the same period in some quarry within the Forest (*ib.* s. 15). Such miners must be registered (*ib.* s. 16), and are to have the exclusive right of obtaining gales, or grants, from the gaveller¹ or his deputy.² A "gale" may be defined as the grant to a free miner of a tract of coal, iron ore, or stone within boundaries set out by the gaveller or his deputy, and the interest of the galee is in the nature of a fee simple, conditional on the payment of the rents and performance of the regulations for the time being in force (24 & 25 Vict. c. 40, s. 1).

The ancient right of the Crown appears to have been to put a fifth man in every gale and receive the profits of his working.

Royalties of rents payable. This right was commuted by the Act of 1838, and by the subsequent awards, galeage, or fixed rents, and also royalties were reserved to the Crown in respect of the then existing gales. Similar rents and royalties are reserved in subsequent gales and are required to be specified in the grants. The amounts are settled by agreement or determined by arbitration (Mines Act of 1838, s. 56). The rents and royalties are to be readjusted at the end of every twenty-one years, if the gaveller or his deputy, or the person or persons entitled to the gale, shall so elect (*ib.* s. 46). Owners of enclosed lands in the Hundred not within the Forest are entitled to receive a moiety of the net rents or royalty in respect of the minerals taken from their lands (*ib.* s. 67); though this provision would not appear to apply to owners who gave the notice under section 68 of the Act of 1838 referred to in note 3 on p. 25, such persons being apparently entitled to deal with their minerals independently of the Crown.

Galees may use all necessary pits, &c., and roads with the sanction of the Gaveller or his deputy, subject to some restrictions with respect to enclosed lands, and making compensation for damage done to the surface of enclosed lands within the Hundred (*ib.* s. 68), and the Commissioner of Woods, &c.,

Surface rights and easements.

¹ The office of Gaveller is now held by the First Commissioner of Woods, &c., for the time being (Mines Act, 1838, s. 13).

² The deputy must be a person skilled in mining.

may grant leases for thirty-one years of small portions of land for any purposes connected with the working of any mine or quarry (*ib.* s. 25, and 24 & 25 Vict. c. 40, s. 6), and the Commissioners of Woods, &c., may grant licences for surface or underground easements through any of the Crown lands in the Forest, or under any mine or work comprised in any existing gale, subject to compensation to be made for any damage or injury caused thereby (Mines Act, 1838, s. 65, and 24 & 25 Vict. c. 40, s. 15).

Applicants for new gales must be "free miners," and must make their applications in writing to the Gaveller or his deputy, describing the situation of the proposed gale and the name of the vein or veins of coal or iron-ore proposed to be worked. The gales are to be granted in the order of application, entry in the Gavellers' or Deputy Gavellers' books being evidence of priority; if more than one application is made on the same day for the same gale, the choice is determined by lot. In setting out the metes and bounds to any new gale the Gaveller or his deputy must have regard to probable cost of winning the coal or ore in the spot galed, and the estimated quantity of coal or ore to be obtained by such winning. The size of the gales therefore does not appear to be limited; but it is provided that no free miner is to have more than three gales granted to him at any one time. No person is to be entitled to any other vein or veins of coal or ore than those galed to him, and underlying or other veins may be galed to other parties, but not so as to impede or injure the tracts previously galed (Mines Act of 1838 and awards).

Persons holding gales must open the mines within five years from the date of the grant, but the time may be extended by the Gaveller in certain circumstances; and must work them in a fair, orderly, and workmanlike manner, and must not cease from working for a space of five years; they must pay the rents and royalties, keep books showing production and plans of workings, permit inspection, and leave barriers where required by the Gaveller or his deputy, and otherwise conform to the rules laid down in the awards.

The free miners are at liberty to sell, transfer, assign, and dispose of the gales and works to which they are entitled either by deed or will to each other, or to any other person or persons whomsoever (Mines Act of 1838, s. 22); all transfers must however be registered in the books of the Gaveller or his deputy within three months (which time limit may be dispensed with for reasonable cause). As a fact the gales are not often worked by the galees, but are sold to private adventurers or companies.¹

¹ See Report of the Select Committee on Woods, &c., held in 1889, when the practical working of the system was fully dealt with.

It follows from the free power of transfer that gales may practically become united and consolidated by purchase (though there appears to be doubt as to whether they can be formally united by the Commissioners of Woods, &c.); and power is given to the Gaveller or his deputy, with the consent of the owners, to alter the boundaries of any adjoining gales, and he may also license the working of barriers (Act of 1861¹, ss. 23, 24).

The Gaveller or his deputy may, by the wish of the owner or owners of any gale, divide the same and apportion the rents (24 & 25 Vict. c. 40, s. 21).

And for that purpose may accept surrenders; and surrenders may be also made of any gale, or part of a gale, by giving notice in writing to the Gaveller or his deputy without any deed, but the Gaveller is only required to accept such surrender upon such terms and conditions as he shall deem expedient and proper (*ib.* ss. 19-20, and Act of 1871², s. 33).

Gales are liable to forfeiture on non-payment of rent or breach of the other rules and regulations in the same way as a lease may be forfeited for breach of conditions (Act of 1838³, s. 29).

In ancient times the practices of the free miners, as regards the opening and working of mines and the carrying of coal or iron ore, were regulated by a Court or Jury of free miners, who met at the Speech House, in the centre of the Forest, and adjudicated on all such matters;⁴ but this Court appears to have become obsolete, and the workings of the mines appear to be subject to the general supervision of the Gaveller or his deputy, in accordance with the awards of 1841, and subject to such further special rules as the Gaveller or his deputy may, with the approval in writing of the Commissioners of Woods, &c., in each case think necessary.

Derbyshire Custom.

From time immemorial there appear to have existed special customs with respect to the *lead* mines in the districts of Derbyshire, known as the King's Fields, within the Hundred of High Peak and within the Hundred or Wapentake of Wirksworth (belonging, subject to such rights, to the Crown in right of the Duchy of Lancaster) and in certain private manors both in the High Peak and Low Peak districts of the same county. These customs were formerly administered by the local mineral "Bar-mote" Courts, but having in course of

¹ 24 & 25 Vict. c. 40. ² 34 & 35 Vict. c. 85. ³ 1 & 2 Vict. c. 43.

⁴ M. Sopwith's preface to the awards of 1841.

time been found to be confused or ill-defined, and unsuitable to modern mining requirements, they were finally established and defined by two Acts of Parliament, viz., the 14 & 15 Vict. c. 94, relating to the King's Field in the High Peak, and the 15 & 16 Vict. c. 163, relating to the King's Field in Wirksworth and to several of the private manors before referred to. The provisions of the two Acts are very similar, and in both the customs established are set out by way of schedule forming part of the Acts. From these Acts the following short sketch of the special customs as established by the Acts has been prepared.

Any subject of the realm may search and dig for mines of lead on all lands within the scope of the Acts other than the sites of buildings, burial grounds, orchards, gardens, pleasure grounds, and highways, and with certain rights of following veins and making searches even under such excepted sites on making compensation for damage. If no vein of lead is found, and the person making the search discontinues it for fourteen days, he must make good the land, and the landowner has power to remove and sell all other minerals except lead when the lead ore has been extracted from them.

The finder of a new vein is entitled to have two meers in length of the vein (a meer=32 yards in length in the High Peak) set out to him by the Bar-master, with the assistance of two grand jurymen (practical miners), on the surface of the ground within six days after giving notice of the discovery and on delivery of a dishful of ore called the "freeing dish"; the third meer is then allotted to the Crown or other person entitled to the mineral duties, and the finder is entitled to each subsequent meer in the vein which he may claim at the time of setting out the first two meers (not exceeding in the Low Peak 50 meers), to be set out in one direction or the other, as the finder may choose; and if the Crown or other person entitled to the mineral duties neglect or refuse to work the third meer, the finder has a right to purchase it at a price to be determined by the Bar-master, or he may work through it, setting aside the ore gotten from it.

The duties called *Lot* and *Cope* are payable to the Crown, in respect of the Duchy lands, or to the persons for the time being entitled to receive them, in respect of the private manors. The former is one-thirteenth part of the ore raised (except in the Manor of Crish, where it is one-ninth),¹ to be taken by the Bar-master, who is to measure all ore before it is removed; the latter is 4*d.* for every

¹ The Lot has been for a long time in fact taken at lower rates than those specified in the Acts. See evidence of the Bar-masters to the Mining Royalties Commission, 3rd Rep.

load of ore (a load=9 dishes of a capacity to hold usually 15 pints of water).

Lead miners are entitled to a way either for foot passengers or carts from the nearest highway to the mine, and also from the mine to the nearest running stream of water, to be set out by the Bar-master in as short a course as may be practicable or reasonable. No compensation is to be claimed by the landowner or occupier for such ways, but they are not to be considered public, and are only to be used for purposes connected with the mines. Every lead miner is also entitled, so long as his mine is worked, without making any payment for the same, to the exclusive use of so much surface land as may be thought necessary by the Bar-master for his mining purposes. He must, however, fence off the land and keep the fences in repair.

Conditions of holding mines. Mines must be worked continuously under pain of forfeiture if not worked after three weeks' notice from the Bar-master, except in certain cases of difficulty.

Transfer of mines. Any person may effectually transfer his interest in any mine to any other person by causing an entry to be made in the Bar-master's book.

Union and consolidation of mines. Any person having two or more veins lying contiguous to each other, or connected by any shafts, gait, or ways, may, with the consent in writing of the Bar-master, consolidate the titles to such veins, and on an entry being made in the Bar-master's book, the titles are to be considered as consolidated, and the working of any of the mines or veins is to be considered the working of the whole.

Forfeiture of mines. Mines are liable to forfeiture on neglect to work as before mentioned, or on sale or removal of ore without payment of duties after notice; and partners may be held liable in the Bar-mote Courts to forfeit their shares to their partners on neglect or refusal to pay their proportion of the expenses of working the same after demand.

Special provisions are made to prevent difficulties arising in the case of veins intersecting each other, in which case the party who first reaches the intersection may work therein as far as he can reach with a pick having a shaft three-quarters of a yard long, standing within his own vein. Veins running alongside, but three feet apart, are considered as distinct veins; but if they meet, the older or prior vein takes the whole. In questions of priority of title, the date of setting out by the Bar-master of the mine is to be considered the origin and commencement of the title. If any person, by means of any sough, engine, or other means, unwater or give relief to any mine, the owner of the mine must deliver to the person giving such

relief such portion of the ore gotten and raised at such mine, under the level at which such relief may be given, as shall be determined by the Bar-master and Grand Jury.

The great and small Bar-mote Courts are still held periodically, the former being concerned chiefly with questions relating to the mines, and the latter having concurrent jurisdiction with other Courts in trials of title, trespass, and debts within the district. There are various officials of these Courts whose positions and powers are defined by the Acts.

Miners' Relief Funds.

A few words may not be out of place with reference to the miners' accident and relief funds in this country, as this is a branch of the subject which does not appear to have been dealt with by any of the authors before referred to.

The establishment and administration of Permanent Societies for the relief of miners and their families in cases of accident afford good illustrations of the way in which the English people usually accomplish what is necessary in reference to mining matters by voluntary action without the necessity of special legislation; these societies (which are termed "permanent," to indicate that the period within which relief may be claimed in cases of accident is unlimited) have been founded at various periods, chiefly consequent upon the occurrence of great mining disasters within the last thirty years in the different mining districts of England and Wales, and have in recent years formed a Central Association, which aims at promoting their mutual interests without interfering with their management in detail. There are now in existence nine of these societies, having a total membership of over 295,000, possessing an annual income of over £259,000, and accumulated funds of over £480,000, provided mainly by subscriptions from the miners, supplemented to some extent by contributions from employers and other sources. In the year 1892 the societies provided for over 2,600 widows and 4,000 children, and dealt with over 38,000 disablement cases.¹

The societies referred to are purely voluntary associations, though registered for the purpose of convenience of administration under, and therefore subject to, the general laws and regulations relating to Friendly Societies.² It is, however, a somewhat curious fact that the establishment of the Permanent Societies has been strengthened, and in one case at least promoted, by the passing of the Employers' Liability Act of

¹ These particulars have been kindly furnished by the Secretary of the Central Association, Mr. George L. Campbell.

² The Friendly Societies Act, 1875, 38 & 39 Vict. c. 60, and Reg. approved 8th December, 1875.

1880,¹ as it seems to have been found that such societies afford a satisfactory basis upon which contracts may be entered into freeing employers from liability under the Act in return for employment and a contribution by the employer towards the funds of the Society which is to provide relief for the miner and his family in case of accident. Such contracts are claimed to be practically secure to the miner by friendly agreement all the benefits which the Act was designed to afford him, free from the risk and irritation which is unavoidably incident to the compulsory enforcement of a remedy provided by statute.

Drainage of Mines.

In order to meet difficulties arising from the flooding of mines in South Staffordshire and East Worcestershire, Commissioners were appointed by 36 & 37 Vict. c. 150, amended by 41 & 42 Vict. c. 81 and 45 & 46 Vict. c. 131, under the title of "The South Staffordshire Mines Drainage Commissioners," and in exercise of the powers conferred upon them such Commissioners appointed arbitrators to survey the surface and mines within the drainage area constituted by the Acts, and to divide the same into drainage districts, and to report to the Commissioners on works necessary for surface and mines drainage and other facts, and to make awards as to various matters, including the rate required for the drainage of mines in each drainage district and the proportion of such rate to be borne by the several mines in each drainage district; such awards becoming binding after due notice and opportunity being given for hearing any objections. Power was also given to the Commissioners to execute and maintain works, to assess and levy rates, and to borrow monies for the purposes of the Acts.

IRELAND, SCOTLAND, ISLE OF MAN, &C.

The laws of Ireland and Scotland as to minerals are practically the same as those of England, but as to the Isle of Man the minerals (consisting chiefly of lead, copper, and zinc) under the customary estates, but not under the Bishop's land, belong to the Crown. This is, however, no real exception from the ordinary rule of the English law as to the ownership of minerals, as the mines in question were acquired by purchase from the Duke of Athol, in the year 1765, under the authority of the Statute 5 Geo. III., c. 26. The Channel Islands and other possessions of Great Britain in Europe are not known to contain minerals of any value, and do not possess any special mining legislation.

¹ 43 & 44 Vict. c. 42. Fresh legislation on the subject of Employers' Liability is now impending, which may shortly have the result of rendering the above remarks inapplicable to the actual legislation on the subject.

CHAPTER III.

FRANCE.

NOTES AS TO MINING LAW.

PREVIOUSLY to 1791 the law as to the ownership of mines in France appears to have varied in character at different periods.

History of Law as to Mining. M. Etienne Dupont, Inspector-General of Mines and Professor at the School of Mines at Paris, is of opinion that originally the French law was based upon the

Roman law, under which permission to work mines was granted to explorers on payment of one tenth part of the produce to the Imperial treasury, and one tenth part to the owner of the soil; that in the feudal times the rights of the Crown were split up, and, so far as concerns the mines, passed to the feudal lords; but that the kings gradually repossessed themselves of their regal rights in respect of mines, so much so that in the 15th century a chief superintendent of mines was appointed (by Louis XI.), having power to work mines or give others permission to work them, saving the indemnity payable to, and the right of preference given to the owners of the soil. Other variations of the law succeeded, and under a decision of the Privy Council of 13th May 1698, Louis XIV., notwithstanding his previous edicts, conferred on the owners of the soil the free right of working coal mines—a right which was withdrawn under Louis XV. in 1744, when coal mines were placed, like other mines, under the system of concessions or permissions. The concessions were not, however, previously to 1791 well defined nor well respected by the power which had created them, and the need of a general law of mines made itself felt. In 1781 four inspectors of mines and quarries were appointed, and in 1783 the School of Mines was established in Paris.

The law of 28th July 1791 (passed by the National Assembly of 1789) declared that mines, both metalliferous and non-metalliferous, and also bituminous substances, coals and pyrites, were subject to the disposition of the nation, in this sense only—that such substances could only be worked by the consent of the nation, and under inspection. By this law the right of preference in obtaining concessions was given to the owners of the soil, who were also authorised to work mines in

their own grounds to the depth of 100 feet without concessions. It also limited the term and areas for which mines were concessible to 50 years and 120 square kilometres respectively.

By the Civil Code of France (Art. 552) the owner of the soil was declared to be the owner of everything above and below, but subject to the laws and regulations relating to mines.

On the 21st April 1810 the law was passed under the Emperor Napoleon I., after careful preparation and full discussion by the Council of State, which law (with some modifications) still regulates the ownership and management of mines in France.

The preferential rights to concessions given to the owners of the soil by the law of 1791 no longer exist; but the law of 1810 (Art. 6) recognises a claim by the owner of the soil upon the produce of the mines to be regulated by the Act of Concession, and (by Art. 7) the concession confers a perpetual right which is capable of disposition and transmission like all other property, except that it must not be sold *in lots or partitioned* without a previous authorisation of the Government to be given in the same form as the concession.

By Art. 8 the mines and plant, &c., are declared to be *immovable* (corresponding with English *real*) property, whilst the extracted minerals, &c., are declared to be *movable* (corresponding with English *personal*) property.

It must not, however, be supposed that all the substances which in England are held to be included within the meaning of the word "minerals" are in France the subject of concession, and so practically reserved from the estate of the surface-owner.

The law of 21st April 1810 was supplemented by the three following decrees, viz.:—

Decree of 18th November 1810, organising and regulating the duties of the corps of mining engineers.

Decree of the 6th May 1811, regulating the process of collection of taxes on mines (Ag. § 488, &c.) This was afterwards modified by two decrees of the 30th May 1860 and the 11th February 1874, having reference to the system of compounding for such taxes.

Decree of the 3rd January 1813, regulating the police of mines and the steps to be taken for the prevention of, or in cases of, accident.

A law of the 27th April 1838 provided for a general system of contribution amongst concessionnaires in the event of their mining district being flooded, and established the right of the administration to withdraw concessions under certain circumstances and subject to certain restrictions.

A law of the 17th June 1840 has reference to salt mines, which had not previously been brought within the provisions of the law of 1810.

A decree of the 23rd October 1852 forbade the union of different concessions of the same description without the consent of the administration.

A law of the 9th of May 1866 abrogated the provisions of the law of 1810 (Arts. 73 to 78), which had rendered it obligatory to obtain the previous permission of the administration to the establishment of furnaces, forges, or ironworks, and also the corresponding provisions of the same law (Arts. 59 to 67, 70, 79 and 80), which had made it obligatory upon the owners of *minières* and the concessionnaires of iron *mines* to keep the owners of furnaces (*maîtres de forges*) in their neighbourhood supplied with iron ore, and which had authorised the latter to work the *minières* in their neighbourhood if not sufficiently worked by the proprietors. Ironworks were in fact before 1866 specially protected industries; the law of that year made them free and brought them within the sphere of the ordinary economic law of supply and demand (Dupont, 440).

The law of 1810 was again modified by the law of 27th July 1880, which substituted a new text for certain Articles (11, 23, 26, 42, 43, 44, 50, 70, 81, and 82), leaving intact the numerical division and the principal features of the old law. The modifications made by the law of 1880 in effect bear upon the following points, viz.: reduction of the right of protection for dwelling-houses against the opening of new works; diminution of the length of inquiries relative to the institution of concessions; declaration of the mode in which the royalty payable to the owners of the surface is to be ascertained (Ag. § 282); regulation of procedure for occupation of land within the areas of concessions; the power of opening works for safety or communication outside the areas of concessions; extension of the power of official supervision over *mines*; regulation of the relations between parties simultaneously working *mines* and *minières* on the same bed of iron ore; and amplification of the provisions relative to the power of the administration in reference to *carrières*.

Further legislation which has recently been proposed on the subject of mines is referred to more fully hereafter.

The following table is intended to illustrate the classification of mineral substances according to the existing French law, with the rules as to ownership, &c., of the different classes:—

CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals	Ownership	To whom taxes or royalties payable	Remarks
<p>I. MINES, viz. the following mineral substances when lying in veins, seams, or lumps <i>i.e.</i> :</p> <p>Gold Silver Platinum Mercury Lead Iron in veins or seams Copper Tin Zinc Calamine Bismuth Cobalt Arsenic Manganese Antimony Molybdena Plumbago, or other metalliferous matters Sulphur Coal (of earth or stone) Fossilised wood Bituminous substances Alum or Sulphates from metalliferous bases¹ (Art. 2).</p>	<p><i>In Concessionnaire</i>, or his assigns. Can only be worked by virtue of an Act of Concession from the State, which vests the property in the concessionnaire for ever, but with power to dispose of and transmit the same like all other property, except that it cannot be sold in lots or divided without the consent of the Government given in the same form as the concession.</p>	<p><i>Partly to the Owners of the surface.</i> The royalties payable to the owners of the surface are sometimes proportional to the yield, sometimes fixed, and sometimes partly fixed and partly proportional. They are generally known as "Redevances trefoncières," being regulated by the Acts of Concession. <i>Partly to the Government.</i> The taxes payable to the Government are partly fixed and partly proportional to the yield, and in addition 10 per cent. on the amount of the taxes is to be paid towards a fund in favour of unproductive mines so as to permit a reduction of the tax in the case of proprietors of mines who have experienced losses or accidents.</p>	<p>The royalties payable to the owners of the surface are regulated under Arts. 6 and 42 of the law of 1810, modified as to Art. 42 by the law of 27th July 1880. The taxes payable to the Government are regulated by Arts. 33 to 36 of the law of 1810.</p>

¹ By a law of 17th June 1840, *salt mines* and *salt springs* are added in some respects to the category of *mines*, but the tax is much higher, viz., 10 frs. per 100 kilos, or about 7s. 6d. per cwt., with a minimum payment for 500 tons each year. (Ag. II., 109.)

CLASSIFICATION OF MINERAL SUBSTANCES—*continued*.

Minerals	Ownership	To whom taxes or royalties payable	Remarks
II. MINIÈRES, viz.: Alluvial Iron Ore ¹ (such as can be worked by open workings or by subterranean works of short extent and not permanent), pyrites suitable to convert into sulphate of iron, aluminous earth and turf.	<i>In surface - owner</i> (Dupont, 432); but when worked by subterranean workings <i>permission</i> must be obtained from, and when worked by open workings a <i>declaration</i> must be made to, the Prefect of the Department.	If let, <i>to the surface-owner</i> . No royalties are payable to the Government, but a <i>patente</i> is paid (see below).	Law of 21st April 1810, Arts. 57 to 70 (partly abrogated and modified by the laws of 9th May 1866 and of 27th July 1880).
III. CARRIÈRES, or quarries of slate, stone, marble, limestone, sand, clay, &c., worked either by open or underground workings.	<i>In surface - owner</i> . Before working, a declaration must be made to the Mayor and be transmitted to the Prefect in order to secure inspection.	As in the case of <i>Minières</i> (see above), the Government may in case of necessity take materials for road or public works, making compensation for same.	Law of 21st April 1810 (Art. 81), as modified by law of 27th July 1880.

¹ Iron-stone or ore lying in seams, beds, or lumps would also be comprised within the term *Minières*, so long as it could be worked by open workings (Dupont, 431). This arises from the construction of Arts. 69 and 70 of the law of 1810.

Both *Minières* and *Carrières* are subject to the usual licence fees ("patente") payable in respect of all trades and professions. These fees differ in amount according to different classes of trades and professions, and in the case of the working of *Minières*

consist of a proportional annual tax of one-twentieth on the value of residences only, and of fixed taxes of 5 francs for each undertaking, and 4 francs for each workman. In the case of peat workings the tax in respect of each working is only $2\frac{1}{2}$ francs. In the case of *Carrières* the proportional tax on residences is also one-twentieth of the value, and the fixed tax is 5 francs for each undertaking, and $2\frac{1}{2}$ francs for each workman (Dupont, 454 and 487).

Mines, on the contrary, are not subject to licence fees (Art. 32). This exception is confirmed by Art. 17 of the law of 15th July 1880, but only applies when the minerals are sold raw without any smelting, &c.

1. *Proportional to the yield.*—These appear to vary according to the custom of districts. **Royalties payable to the owners of the surface.** In the *Coal Mines* of the Loire district they amount to one-fourth of the gross produce in the case of open workings, and vary from one-sixth to one-twentieth on the gross produce in the case of workings by pits, according to the depth of the pits for seams of two metres thick, and are reduced by one-third to three-fourths for seams varying from less than two metres to less than one-half a metre in thickness. They amount in practice from about 5*d.* to 7*d.* per ton, but there are cases in which from fr. 1.75 to fr. 1.85 (equivalent to from 1*s.* 5*d.* to 1*s.* 6*d.*) a ton have been paid on a production of 350,000 tons (F.-G., vol. 1, p. 428).

In the Aveyron coalfield the royalties are reserved on a different scale, said to be much less in practice than the rates above mentioned.

In *Iron Mines* the royalty varies from 1*d.* per metric quintal (*i.e.*, about 1*s.* 8*d.* the ton) to about $\frac{3}{4}$ *d.*¹ the ton, and in other cases from about 11*d.* to about 7*d.* the cubic metre (Dupont, 140–2).

2. *Fixed.*—These, which appear to be the most usual form of royalties, seem to vary in amount to a great degree, *e.g.*, from 300 francs per hectare (2.471 acres) or about £5 an acre (in the case of the Salt Mines de L'Est) down to $\frac{1}{4}$ *d.* per hectare (Iron Mines de Rancie); but it is said that royalties of from $\frac{1}{2}$ *d.* to $\frac{1}{4}$ *d.* per hectare are by far the most frequent rates (Dupont, 142).

3. *Partly fixed and partly proportional*, which vary from

¹ This is so according to Dupont, who puts the lowest tonnage royalty at 8 centimes, but gives no examples. In another author examples are given in which the lowest royalties for iron are 70 and 80 centimes the ton (Ag., vol. 1, p. 426).

about 1*d.* per acre and 2 per cent. on the produce, to about $\frac{1}{4}$ *d.* per acre and 1*d.* per ton of the mineral extracted (Dupont 113).

These royalties payable to the owners of the soil are altogether independent of the indemnity payable to them in respect of occupation of and damage to the surface, which are provided for by Arts. 43 and 44 of the law (as modified in 1880).

The principle on which the royalties payable to the owners of the soil are fixed by the Government in the different districts is not very clear; but it is understood that regard is taken of custom, local usage, prescriptive rights, and precedents of all kinds, the fact or the absence of previous mining operations, special circumstances as to the position of the mines, &c. (F.-G., Vol. 1, p. 428).

The owner of the soil has also the right of being heard by the Council of State before the amount of the royalty is fixed (Arts. 6 and 42 as modified in 1880); but, when once the amount is fixed by the Act of Concession, it overrides any agreement previously made between the owner of the soil and the concessionnaire (Dupont, 147). The same rule, however, does not apply to agreements as to royalties made subsequently to the Act of Concession, but even such agreements may be nullified by the ordinary tribunals (Dupont, 151).

In addition to the royalties payable to the owner of the soil, he is entitled to be indemnified in respect of land occupied or damaged. Surface land occupied or damaged. he is entitled to be indemnified in respect of land occupied for the purpose of, or damaged by, the searching for (Art. 10) and working of mines (Arts. 43 and 44 as modified in 1880).

The concessionnaire may be authorised by a decision of the Prefect of the Department in which the mine is situate to occupy within the boundaries of his concession the ground necessary to the working of his mine, the smelting of minerals, or the washing of coals, and also for the construction of roads and of railways, when the latter do not alter the surface of the ground; but the owners of the surface must have been called upon to state their objections. In such case, or in case of occupation by the permission of the Government for searches, the indemnity due to the owner of the surface is fixed at double the net produce of the damaged ground, if the occupation is only temporary, and if within one year the land may be cultivated as before the occupation. If the occupation lasts more than one year, and if after the occupation the ground occupied cannot be cultivated as before, the owner of the surface has the option of obliging the mine-owner to purchase it at double the value it had before the occupation (Art. 43 of law of 1810, modified by law of 27th July 1880).

As regards canals and railways which cannot be constructed within the boundaries of the concession without altering the surface of the ground, and also as regards the canals, railways, necessary roads and works of vital importance to the mine outside the area of the concession, a decree made in the Council of State may declare them to be works of public utility, and the Law of Expropriation of 3rd May 1841 may be brought into operation (Art. 44 of the law of 1810, modified by law of 27th July 1880).

Questions arising on the subject of the indemnity have to be dealt with by the civil tribunals, but may be referred by agreement to arbitration (Art. 43 as modified in 1880).

In addition to the indemnity for land occupied, the owner of the surface can also obtain compensation for depreciation of adjoining land (Dupont, 170), but there is nothing to prevent concessionnaires and surface-owners from coming to mutual agreements with respect to surface damage in substitution for the statutory indemnity (Dupont, 171); and the owner of the soil has a right to be heard before land can be occupied by virtue of an order of the Prefect for the searching for, or working of, mines (Dupont, 172).

The owner of the soil is also entitled to compensation for any damage to the surface through working the mines other than by occupation (*e.g.*, by subsidence), but in this case the measure of damage is the actual loss suffered, instead of double the value of the land (Dupont, 174, and Art. 1382 of the Code Civil are applicable).

He has also the right to have security from the concessionnaire against damage to inhabited places (Art. 15, and Dupont, 196).

The *fixed tax* is payable annually according to the extent of the concession, and is at the rate of 10 francs for the square kilometre (Art. 34).

Fixed and proportional taxes payable to the Government. This fixed tax is payable in respect of each concession of mines under the same surface, so that it may be payable several times over in respect of the same surface where there are concessions of different beds of mines one above the other (Dupont, 216).

It also continues payable, whether the mines are worked or not, until the granting of a decree of renunciation of the concession.

The proportional tax is fixed each year by the budget of the State, but is not to exceed 5 per cent. on the net produce (Art. 35). The *centimes additionals* raise the rate to 5.5 per cent.

Reductions or remissions may, however, be and are frequently

made in the rate of the payment (Dupont, 243, 247), and considerable allowances are made in estimating the expenses to arrive at the net produce (Dupont, 260).

Dupont gives the total result to the Government for 1878 (omitting fractions) as follows, viz. :—

			frs.	
Fixed tax	...	...	104,349	
Proportional do.	...	...	1,966,088	
10 cents. additional for relief, &c.			207,043	
Total...	...	...	2,277,481	or = about £91,090

and calculates that the payments in respect of coal in 1878 amounted to little over 1*d.* in the ton (267).

The result for the year 1891 (based on the production for 1890, but not including the returns from Algeria) was as follows, viz. :—

			frs.	
Coal and other fuel	...	...	3,458,891	
Iron mines	...	...	92,651	
Other substances	...	...	435,599	
Total	...	...	3,987,141	= about £159,500

(“Statistique de l’Industrie Minérale pour l’année 1890,” published 1891, p. 43.)

The above figures do not take into account the royalties payable to owners of the surface.

The concessionnaires of mines are also subject to ordinary general taxation, including the impost of 3 per cent. per annum on profits of companies established under the law of 29th June 1872 (Dupont, 272).

No one but the proprietor of the soil can search for mines except with the consent of the proprietors, or by the authorisation of the Government, which is not to permit of searches &c. within walled-in grounds or in courts and gardens, or of pits &c. being opened within 50 metres of habitations or walled-in grounds, without the consent of the proprietors. The proprietor himself can make searches in any part of his property without authority, but must not work without a concession (Arts. 10 to 12). In case of searches by the authority of the Government the proprietor of the soil has a right to an indemnity, payable beforehand (Art. 10).

Any person, whether a naturalised Frenchman or not, acting by himself or in partnership, may demand and obtain a concession (Art. 13), if he proves that he has sufficient means to undertake and carry on the work, and to satisfy the taxes and indemnities imposed upon him by the Act of Concession (Art. 14); and in case of his working under habitations or under other mines in course of working or in their vicinity, he may be called upon to give security for compensation in case of damage (Art. 15).

The Government is free to choose between the various parties seeking for a concession of the same mine; but if the discoverer of the mine does not obtain the concession, he is entitled to an indemnity from the concessionnaire, to be regulated by the Act of Concession (Art. 16).

The demand for a concession is made by petition to the Prefect of the Department in which the mine is situate, accompanied by a plan of the surface (Art. 30), and particulars of any negotiations with the surface-owner on the subject of his rent (Dupont, 89). It must then be advertised and published for at least two months in a prescribed manner (Art. 23, as modified in 1880). Opposition or concurrent applications may be lodged with the Prefect (Art. 26, as modified in 1880).

This is composed of two distinct parts, viz., the decree and the list of conditions ("cahier des charges"). A form of an Act of Concession is given below, from which it will be seen that the first part of the Act of Concession, the decree, sets out the names and descriptions of the concessionnaires and the nature and situation of the minerals conceded, and fixes, so far as may be, the royalties or indemnities payable to the surface-owner and the discoverer (if any), and refers to certain general provisions of the law with reference to the taxes payable to the Government, the right of inspection and regulation, the consequences of undue delay in working, the power of abandonment, &c. In the second part, the list of conditions, are set out certain special conditions as to the mode of working the mine and otherwise to which the particular concession is to be made subject. These conditions include the fixing of signs showing the boundaries of the concessions, the preparation and return to the Prefect of plans and sections showing the manner proposed for working the mines, and the annual furnishing to the Prefect of plans and particulars of the workings in the previous year, and other conditions which may be said to be of a more general nature, with reference to the powers of the Prefect to order and determine the thickness of barriers to be left, and to determine what works may be necessary in communication

Form of
Act of
Concession.

with other mines for ventilation and drainage, and specifying the rights of proprietors of other minerals within the same area to which the concession is made subject.

The demand, having been registered at the prefecture, is examined and reported on by the Government Engineer of Mines (Dupont, 72), who must satisfy himself that it conforms with the regulations. The papers are then transmitted to the Inspector-General of Mines, who examines them closely and reports to the Council-General of Mines (Dupont, 101).

The Council-General considers the project of concession, and transmits it with the opinion of the Council to the Minister of Public Works, by whom it is examined, and modified if necessary. It is then transmitted to the Council of State, and first submitted to the consideration of the Committee of Public Works; then it is considered by the Council in General Assembly, and afterwards a concession may be granted by a decree of the President of the State (Dupont, 102). Until the granting of the decree all opposition is admissible before the Minister of the Interior or the Secretary-General of the Council of State (Art. 28).

One concessionnaire can obtain several concessions, but on condition that he proceeds actively with the working of each.

As before observed, concessions are transferable like all other property, but cannot be sold in lots or divided without the consent of the Government (Art. 7).

The following are some examples of sales:—

The concession of Hasnon, in the Nord, granted in 1840, together with certain shares in the adjoining concession of Vicoigne, were purchased in 1843 by the Anzin Company for 600,000 frs. = £24,000 (Vuill. 55).

The concession of Douvrin, in the Pas-de-Calais, granted in 1859, was purchased in 1873 by the Company of Lens for 500,000 frs. = £20,000 (Vuill. 110).

A concession of copper and silver over an area of 6,230 acres in Corsica, held from the French Government in perpetuity, at a dead rent of 286fr. 80c. and a royalty of 5 % on the net profits, was sold in 1886 to the Argentella Mines, Limited. The purchase-money was £241,500, payable as follows, viz.: £200,000 in fully paid-up ordinary shares, £20,000 fully paid-up preference shares, £20,000 debenture bonds, and £1,500 in cash.

A concession of silver, lead, and zinc ores within an area of about 40 square miles in the Pyrenees of Lentin and St. Lary, held from the French Government in perpetuity, subject to the payment of the ordinary taxes, amounting to about £50 a year and 5 % on the net profits, was sold in 1886 by a former company

to the Castillon (Pyrenees) Mining Company, Limited. The purchase-money was £70,000, of which £58,000 was payable in fully paid-up shares, and £12,000 in cash or shares at the option of the new company.

The concessions of Pierrefitte, Heas, and Garvanie, Palouma and Arau, in the Hautes-Pyrénées, France, of mines producing silver, lead, and zinc ores (blende) within an area of 17,000 acres, held from the French Government at a fixed rent of about £40 per annum, were sold in 1887 to the New Pierrefitte Mining Company, Limited. The purchase-money was £23,214, payable as to £2,000 in cash, and as to £21,214 in fully paid-up shares.

A case occurred recently in which a French contractor took over the concession of a lead mine employing from 180 to 200 hands, on terms equivalent to the payment of a rent of £1,000 for one year, at the end of which time the mines were to revert to the concessionnaire, unless a fresh arrangement was come to.

The Rodez Collieries, Limited, was brought out in London in the month of February, 1891, having been formed to acquire seven concessions of coal mines in the Aveyron district under 3,900 acres, the purchase-money to be paid to the vendor being £150,000. It is understood, however, that this Company has collapsed, the concessions having since been sold by auction under a lien by the vendor for unpaid purchase-money. It appears from the prospectus issued by the company that coal in France is protected by an import duty of 1 franc per ton. The import duty is in fact 12 cents. per 100 kilos, or 1.20 frs. per ton.

The French Mines, Limited, was also brought out in London in the month of February, 1890, having been formed to acquire several concessions of gold, silver, and lead. The purchase-money to be paid to the vendors in this case also was to be £150,000.

Different concessions of the same description cannot be united except by the authority of the Government (decree of October 23, 1852; Dupont, 285), but examples of such unions with the consent of the Government are not uncommon (Dupont, 289), though occasionally the Government refuse to unite several concessions into one concession so as to relieve from the necessity of working under each concession (Dupont, 291).

As a matter of fact, in the north of France at least, concessions are commonly united, and are generally worked by companies, the shares in which are dealt with and quoted on the stock exchanges. The sale of concessions is thus constantly going on in detail. The following figures show the selling prices at

various dates of the shares in the six principal coal companies operating in the north of France :—

TABLE A.¹
AVERAGE PRICE OF SHARES AT VARIOUS PERIODS OF THE SIX
PRINCIPAL COLLIERY COMPANIES IN—

—	The Nord			Pas-de-Calais		
	Anzin	Aniche	Escarpelle	Dourges	Courrières	Lens
A.D.	frs.	frs.	frs.	frs.	frs.	frs.
1806	22,000	—	—	—	—	—
1830	90,000	1,500	—	—	—	—
1840	160,000	8,000	—	—	—	—
1850	200,000	16,000	500	—	—	—
1853	—	—	—	—	1,000	500
1855	—	—	—	1,000	—	—
1860	150,000	78,000	1,000	2,500	3,500	2,000
1870	300,000	98,400	1,150	3,800	10,500	9,000
1880	535,700	180,912	5,077	8,228	27,598	25,002
1890	444,500	188,832	3,622	11,137	43,739	26,990
Sept. 14, 1891	505,000	198,000	2,230	9,400	44,200	26,450

It will be seen from the above table that the value of the shares in the Company of Aniche was 132 times greater in 1891 than it was in 1830, that the value of the shares in the Company of Lens was over 50 times greater in 1891 than it was in 1853, and that the shares in the other companies have all increased more or less considerably in value since the earliest dates at which records of the values are available from the quotations on the Bourse at Lille or other reliable sources.

Through the union of concessions, the fields or areas of mines held in the same hands sometimes become very large; thus the principal company in the district of the Nord—that of Anzin—owns eight concessions, comprising together an area of 28,053 hectares=nearly 70,000 acres, or over 109 square miles.

In case the working of a concession be reduced or stopped in such a way as to endanger public safety or the requirements of consumers, the Prefects, after having heard the owners of the mines, shall make a report to the Minister of Public Works, in order that a decision may be taken (Art. 49, law of 1810). In such cases the Decree of Concession reserves to the Government the right to withdraw the concession; but this power has rarely been made use of (Dupont, 315).

In 1838 many mines were left unworked, and the flooding

¹ This table has been certified by Mr. Vuillemin to be correct.

of mines became a public danger ; a special law (April 27, 1838) was passed, empowering the Government to force the mine-owners to form syndicates to execute the necessary works to protect their mines and to contribute to the cost thereof *pro rata* of their interest. In case of non-payment of the contribution to such cost, the Government may withdraw the concession, and sell the mine by auction. Notwithstanding the minute provisions of this law, in 1877, out of 1,216 mines, only 499 were worked, and out of 612 coal mines, 277 were abandoned. In order to put an end to this state of things, the Minister of Public Works gave notice to the mine-owners who had stopped work that, if it were not resumed within two months, their concessions would be withdrawn ; but these threats were not enforced. From the year 1838 to 1877 only six declarations of forfeiture occurred, and there only appears to have been one since the latter date. In 1883, out of a total number of 1,328 concessions, only 506 were worked (Ag. § 565, note 2). In the year 1890 there were in France 1,372 concessions in existence, of which 465 only were worked (Stat. de l'Industrie Minérale pour l'année 1890, p. 2).

Special provisions are made in the law of 1810 as regards concessions previously granted, and also as regards the workers of mines who had not complied with the law of 1791. **Ancient concessions.** Many of the most important coal mines in France are still held under such concessions (Dupont, 396). The concessions granted previously to the publication of the law of 1810 were merely confirmed *ipso facto*, the concessionnaires being rendered liable to pay the rents to the Government provided for by the law of 1810 (Arts. 51 and 52). The workers of mines who had not complied with the law of 1791 were bound to obtain a concession from the Government in accordance with the law of 1810 (Arts. 53 to 56).

The mode in which these can be acquired within the boundaries of the concession has already been stated. Under Art. 44 of the law of 1810, modified by the law of 27 July 1880, concessionnaires can obtain the right to execute works of this description outside the limits of their concessions, on the Council of State declaring such works to be of public utility.

This is fully provided for by Arts. 47 to 50 (inclusive) of the law of 1810, amended by the law of 27 July 1880 and numerous other laws, decrees, and ordinances, in accordance with which the Government mining engineers exercise, under the orders of the Minister of Public Works and the Prefects, extensive powers of inspection with the view of preventing danger and providing

Easements of way, water, &c.

Inspection and regulation of mines.

for the preservation of buildings and the safety of individuals. The Prefects have also power, at the request of the engineers, to require mine-owners at their own cost to execute works necessary to protect buildings and the surface, and to secure the safety of the public, the mines, the workmen, and of ways of communication, mineral waters, and the water supply for towns, villages, or public establishments at the cost of the concessionnaires (Arts. 49 and 50 and decree of 26th March 1845).

By a decree of the 3rd January 1813 (Art. 15) (which applies to "minières" as well as mines, but not to "carrières") mine-owners are required to keep on their premises, in proportion to the number of workmen and the extent of the workings, such remedies and aid appliances as may be required by the Minister of Public Works, and to conform to the regulations approved by him in that behalf. Under this article directions have been issued as to the first aid to be given to persons wounded or injured, and a list of the remedies to be kept on the spot is prescribed. Under Art. 16 of the last-mentioned decree, the Minister of Public Works, on the proposition of the Prefect and the report of the Director-General of Mines, is to indicate the mines which, from their importance and the number of workmen which they employ, should keep and maintain at their expense a surgeon specially attached to the service of their undertaking. One surgeon may be attached to several undertakings at the same time by agreement, the expense to be divided amongst the different undertakings in proportion to the extent of their interests.

The same decree (Art. 11) provides that in case of accident in mines, notice must at once be given to the authorities, who (Art. 14) shall have power to take all necessary measures either to put an end to the danger or to prevent the consequences, and (Art. 17) the owners and managers of neighbouring mines are required to furnish all the assistance they can, any expenses (Art. 20) of assistance to wounded men or repair of works being borne by the owners of the mine where the accident occurred. The mining engineers or other authorities must report upon the accidents, and in cases of negligence the mine-owners and managers may be punished by imprisonment and fine, besides being made liable in damages.

There is nothing approaching to *compulsory* insurance of workmen in France; but by the law of 11th July 1868, any workmen may make provision for the cases of death or accident, the insurance fund being administered by Government officials, and by the law of 18th June 1850 (modified by the law of 20th July 1886) workmen may make similar provision for the case of old age.

In addition to the public insurance institutions there are

numerous private associations or mutual aid societies, the objects of which are usually to make provision for sickness and burial, but occasionally also to provide pensions in case of old age or incapacity for work. These mutual aid societies are divided into three classes, known as : First, *Free or Private Societies*, which, beyond requiring official authority under the law relating to associations, are under no restriction as to their rules and organisation ; secondly, *Approved Societies*, which are regulated by State decrees and subject to the approval of their rules by the Prefect, and have in return certain legal advantages over the *free* societies ; thirdly, *Societies recognised as being of public utility*.

There are also insurance societies formed in connection with particular undertakings, differing from the free or authorised mutual societies in this, that the associates have between them the common bond of being workmen in the same undertaking, and are generally bound to belong to the society as long as they are in the employment of such undertaking. In other respects the free and authorised societies and the societies in connection with particular undertakings resemble one another, the objects in both cases being generally to ensure assistance, temporary or for life, and medical aid to sick or wounded workmen, relief to widows and children, and sometimes pensions in old age. In both cases the advantages are assured by the contributions of all those who participate to a common fund, whilst the contributions given by the head of the undertaking resemble the contributions given by honorary members of the mutual aid societies.

There is no legal obligation to form relief funds in connection with mining undertakings ; but, as a matter of fact, nearly all mines have their special relief funds, with special regulations for management of the same. Some of these funds (and this is usually the case) are supported by subscriptions from the workmen, supplemented by contributions from the mine-owners ; some of them by the workmen alone, and some of them by the mine-owners alone. The contributions by the workmen usually average from two to three per cent. of the amount of their wages.

Many proposals have been brought forward of late years for general legislation on the subject of relief funds, but none of them have as yet been carried into effect.

Some of the mining companies make special terms with hospitals for the benefit of their workmen ; others have established hospitals ; others have established co-operative shops ; others erect houses and establish schools for the benefit of their workmen, whilst certain companies make free distributions of coal amongst their workmen.

At the head of the mining administration is the Minister of

Public Works, whilst in each Department the Prefect is the head of the service, under the authority of the Minister of Mining authority. Public Works. Under the immediate orders of the Minister of Public Works is the Council-General of Mines. This is composed of the Inspectors-General of the first and second class, presided over by the Minister of Public Works, or, in his absence, by a vice-president appointed for a year by the Minister out of the Inspectors-General.

The duties of the Council-General of Mines are to give their opinion as to the applications for concessions, as to the conditions to which concessionnaires should be subjected, and as to contentious questions submitted to the Minister of Public Works. Below the Inspectors-General of the first and second class come the engineers-in-chief, also divided into two classes, and under these are the ordinary engineers of the first, second, and third classes. To these are added certain inferior officers called "gardes mines," who are divided into four classes.

The engineers-in-chief have to render accounts to the Prefects of mining works and to receive and execute their orders relative to inspection; to report to the Director-General, the Prefects, and the "Procureurs" of the Republic all breaches of the laws and regulations as to mines, and to inspect the mines in their Departments in turn, under the orders of the Director-General. They have the right to inspect the plans of all ancient concessions of mines which should be deposited at the prefectures, and to take copies to keep at their offices; also minutes of all the plans and maps relative to new concessions which have been applied for or obtained. They propose to the Prefects the advertisements and lists of charges for concessions of mines, and they give their opinions on the reports of the ordinary engineers, whose duties they must fulfil in cases of necessity (Arts. 47 to 50 as modified in 1880).

The ordinary engineers must visit at least once a year all the mines being worked in their sub-department, and in case of a breach of the laws, or of danger or accident, being notified at a working, they must attend at the place and prepare a report for the engineer-in-chief with the view of effecting a remedy. They must notify to the mine-owners defects which they may remark in the workings, and propose such improvements as they may consider desirable. They have to verify the plans attached to applications for concessions, and give their opinions upon such applications, and also on all official matters relative to mines, minières, and carrières. They have to prepare accounts of mine-rents, and take part in the committees of assessment of such rents, and (in cases contemplated by Art. 50 of the law of 1810) when a working endangers public safety they propose to

the Prefect measures of prevention, and cause them to be carried out (in the event of the concessionnaires refusing) by virtue of decision of the Prefect, and in cases of imminent danger they may call upon the local authorities to take immediate preventive measures. They may act as experts in mining matters, and they have other similar duties and powers.

The "gardes mines" have to assist the engineers in all that concerns the inspection of mines, *minières*, and *carrières*; the collection and copying of surface and underground plans, and the inspection of steam-engines and the plant of railways (which also forms an independent part of the duty of the engineers of mines).

There is a head office of mines in Paris, and the rest of the country is divided into various districts and sub-districts for the purposes of the mining administration.

The principal objection which is taken to the French system of mining law seems to be that there is too much State control, especially in the matter of granting concessions, **General Remarks.** it being left to the pleasure of the State whether the mine should be granted or not, and to whom it should be granted; whilst in other countries the discoverer (as in Germany) or the first applicant (as in Spain) is entitled to a grant of the concession; and a well-known French author (Ag. X.) contrasts this position of the mining industry in France, with regret, with that of England, which, he says, has had the happy fortune never to know, as regards the working of mines, any system but that of complete industrial and economic liberty, except so far as State interference has been directed towards avoiding accidents in mines.

It is not surprising to find that the respective claims of the concessionnaires of iron mines on the one hand, and of the owners of the surface on the other hand, with respect to the boundaries of the *mines* and of the *minières* respectively, have given rise to numerous lawsuits (Dupont, 434); and, although Art. 70 of the law of 1810 (revised in 1880) aims at preventing such difficulties (by providing that, when the Minister of Public Works, at the instance of a concessionnaire, forbids the owner of a *minière* from continuing his workings so as to prevent the working of the *mine* by the concessionnaire, an ample indemnity is to be paid by the concessionnaire of the *mine* to the owner of the *minière*), there is evidently still room for much dispute on the subject (F.-G. 911 and Ag. § 684).

Difficulties also seem to arise between the respective concessionnaires of different substances under the same area (F.-G. 89), and between the concessionnaires of adjoining mines, in spite of the provisions made by the Acts of Concession K to O, some of which are considered by competent authorities to be of doubtful validity (Ag. § 415).

As before stated, further legislation has been proposed, and the Report of a Commission of Deputies presented to the **Proposed** Chamber by M. Jacques Piou in February 1889 legislation. contained the text of a proposed new law, by which the Commission proposed that the existing mining law should be codified, a variety of alterations being at the same time introduced, such alterations having been principally suggested by four *projets de loi* submitted to the consideration of the Commission. The following are the principal alterations which were proposed by the Commission, viz. :—

The suppression of the class of *minières*, and the practical fusion of the substances now belonging to that class into the category of *mines* which are the subject of concessions. The reason for the existence of *minières* as a separate class is stated by the Commissioners to have disappeared on the passing of the law of 1866, which put an end to the servitude which such *minières* were previously under with respect to the State-authorized ironworks. Provision is proposed to be made for the protection of the proprietors of subsisting *minières* by entitling them to concessions on application within two years, and for cases in which a *minière* lies above a *mine*, when, if the concession is made to the owner of the *mine*, he must before taking it over pay an indemnity to the owner of the *minière*.

The recognition of the right to the concession of the *discoverer*, who proves the existence of a bed of mineral substance, is proposed. This is practically an adoption of the German system of institution of ownership, and is intended to meet the objections which are raised against the present system of granting concessions at the goodwill of the Government.

It is proposed to give the right of *search* to the first comer who complies with the regulations and gives security against damage to the surface. It is proposed, however, to accord to the owners of the surface for six months a right of preference to the permissions to search for minerals on their own land.

It is proposed to limit the extent of concessions to a maximum of 2,000 hectares for mines of combustible substances, and of 800 hectares for mines of other descriptions, and no two points of the area are to be further from each other than 5 kilometres in the case of combustible substances, or than 3 kilometres in the other cases.

It is proposed to abrogate the present fixed rate of indemnity for land occupied, and in each case to leave it to a jury to fix the amount of compensation to be paid.

It is proposed to raise the fixed rent payable to the Government from 10 cents to 50 cents per hectare, and (confirming the present practice) to define the proportional rent as 5 per cent.

of the net profit calculated on the results of the previous year's raisings.

It is also proposed to confine the power of forfeiture to the single case where a mine continues unworked for two years and the proprietor fails, for six months after notice from the Prefect, to continue working, in which case he may be cited before a civil tribunal, which may order the sale of the mine, and, on failure to sell, the mine may become forfeited. The concessionnaire is no longer to have power to renounce his concession.

The *redevances trefoncières* payable under old concessions are to be confirmed, but the concessionnaires are to have the right to buy them up (in cases where they are fixed at 20 years' purchase, and in other cases at a sum to be fixed by the tribunal having regard to the value of the minerals). It would appear that the proposed law does not contemplate the reservation of any rents to the owners of the surface in future concessions; but the right of preference to a permission of research accorded to the owner of the surface during the space of six months (available afterwards for two years and renewable by the Prefect) appears to be intended to have the practical effect, if it is exercised, of securing to him the right to a concession of the minerals under his land.

The Commissioners remark that the main object of legislation should be to assimilate mining property to ordinary property, to secure entire freedom of contract and the independence of the mine-owner; and they say that when such legislation is attained the law as to mining will be confined to some regulations for the security of workmen and of the dwellers on the surface, and some rules as to the institution of the property and the right of inclosure. They also remark that England and the United States are almost in complete possession of a law as wise in its simplicity as that which they indicate as the perfection of mining law; that everywhere the *regalien* right is being assailed; that everywhere the power of the State in such matters is being restrained; and that everywhere greater belief is being placed in private enterprise and in industrial liberty, and that it is a remarkable fact that the more this faith increases the more mineral wealth is developed.

It is understood that no change of the law has yet been made in accordance with the report of the Commissioners, and that no such change is likely to be made for some time to come at least, the general feeling being that complications and difficulties would result if any such change were made.

Coal and coke $11\frac{3}{4}d.$ per ton, foundry iron and forge pig, containing less than 25 % of manganese, $7\frac{1}{4}d.$ per cwt.
 Import duties. (Return of Foreign Import Duties, presented to Parliament September 1893).

CHAPTER IV.

FRANCE.

FORM OF ACT OF CONCESSION.

1st Part.—DECREE OF CONCESSION.

(Adopted in 1882.)

NOTICE.—(*General* clauses, letters A B C, &c.; *special* clauses, same letters with a number placed on the right, as B¹, B².)

Reference to :

1st. Law of 21 April 1810, modified by the Law of 27 July 1880;

or for the concessions of Iron mines,

Law of 21 April 1810, modified by the Laws of 9 May 1866 and 27 July 1880.

2nd. Decree of 18 November 1810.

3rd. Decree of 6 May 1811, modified by Decree of 11 February 1874.

4th. Decree of 3 January 1813.

5th. Law of 27 April 1838, and Ordinance of 23 May 1841.

6th. Ordinance of 18 April 1842.

7th. Ordinance of 26 March 1843, modified by Decree of 25 September 1882.

8th. Decree of 23 October 1852.

NOTE.—In addition, when for concessions of salt mines and saline springs or wells,

Law of 17 June 1840, and Ordinance of 7 March 1841, and also Ordinance of 26 June 1841.

NOTE.—But in such case the Decrees of 6 May 1811 and of 11 February 1874 must be excluded.

ARTICLES.

Art. A.—Concession is made to
of the mines of
included within the limits hereafter stated, Commune of
Arrondissement of
Department of .

Art. B.—This concession, which shall take the name of
Concession of , is limited in accordance
with the plan annexed to this Decree as follows :

the said limits include a surface of square kilometres
hectares.

Art. B¹.—(Special to concessions of iron mines, not including
iron ore in seams, in beds, or alluvial ore, which are workable
as *minières* or some of these classes.) (*a*) (In certain cases two
articles, B¹ and B², may be included together in the Decree.)

This concession does not apply to iron ore in seams, or in
beds, or alluvial ore, (*b*) (in accordance with the cases the
three sorts of ore may be kept in, or some of them may be
excluded), which may be worked as *minières* and remain at the
disposal of the owners of the said *minières* in accordance with
the terms and conditions of Articles 57, 58, 68, 69, 70, of the
Law of 21 April 1810, modified by the Laws of 9 May 1866
and 27 July 1880.

Art. B².—(Special for concessions of iron mines, including
iron in seams, in beds, or alluvial ore, workable as *minières*, or
including at least some of them.) (Notice (*a*) of Art. B¹.)

Are now joined to the concession, without prejudice to the
rights given to the owners of *minières* by paragraph 3 of the
Law of 21 April 1810, modified by the Laws of 9 May 1866 and
27 July 1880, the iron ore in seams, or in beds, or alluvial ore
(note (*b*) of Art. B¹), which may be worked as *minières*.

The limits between the iron ore included in the concession
and the ore of the *minières* joined to the concession which
cause an indemnity to be paid to the owners of the said *minières*
are fixed as follow :

Art. C.—Nothing is now decided as to the deposits of any other
mineral
the concession of these deposits of mineral may be henceforth
granted, if there be reason for it, in the usual forms either to the
Concessionnaire of the mines of
or to any other person.

Art. D¹.—(a) (Special in case there is a rent to pay to the discoverer.)

Note (a) of D¹.—As agreed with the Council of State, this Article since the adoption of the form has been worded as follows :

Art. E.—The Concessionnaire shall comply with the provisions of the conditions of grant annexed to this Decree, and which is considered as being an essential part thereof.

1. The plan and description of the working.

When such documents have been furnished the petition shall be published and posted up for two months in the places and in accordance with the forms fixed by Articles 23 and 24 of the Law of 21 April 1810, modified by the Law of 27 July 1880, for the applications for Concessions of Mines.

The oppositions, if there should be any, shall be received and notified in the forms fixed by Article 26 of the same Law.

The renunciation shall only be effectual when it shall have been accepted, if there be ground for such acceptation, by a Decree debated in the Council of State.

Art. G.—This Decree shall be published and posted up at the expense of the Concessionnaire in the Commune in which the Concession is situate.

Art. H.—The Minister of Public Works and the Minister of Finance are intrusted, each as far as it concerns him, with the execution of this Decree, which shall be printed by extract in the *Bulletin des Lois*.

2nd Part.—FORM OF CONDITIONS OF MINING
CONCESSIONS (Cahier des Charges).

(*General* clauses, letters A, B, C, &c. ; *special* clauses, A¹, B², &c.)

Art. A.—Within the delay of _____ from the date of the notification of the Decree of Concession, boundaries shall be placed at all points used as limits to the concession where it shall be deemed necessary. This work shall be done at the expense of the Concessionnaire, under the control of the Prefect and in the presence of the Government Mining Engineer, who shall draw up a report of the proceeding. Official copies of this written report shall be deposited with the official documents at the seat of the Prefecture of the Department of _____ and at that of the Commune of _____

Art. B.—Within six months' time from the date of the notification of the Decree of Concession, the Concessionnaire shall forward to the Prefect the plans and sections of the mines, and of the works already executed. These plans to be made on a scale of 0^m.001 per metre, set to the exact north and divided into squares of ten millimetres. He shall join to it a statement showing in detail the mode of working which he intends to follow.

This mode of working shall also be shown on the plans and sections.

The levels of the principal points, such as the mouths of shafts or adits, the points of connection of the headings with the shafts, and of the workings with one another, with reference to a fixed horizontal level, shall be marked in metres and centimetres on the plans.

The Concessionnaire shall join to it on tracing paper a plan of the surface fitting on to the plan of the workings and

showing the position of the houses and inhabited places, buildings, ways, mineral waters, springs supplying towns, villages, hamlets, and public establishments, canals, watercourses, &c., &c.

Art. B¹.—(For salt mines.) Within six months from the date of the notification of the Decree of Concession, the Concessionnaire shall submit to the Prefect the statement, the plans, and sections provided for in Article 3 of the Ordinance of 7 March 1841.

The plans shall be made to the scale of 1 millimetre per metre set to the exact north, and divided into squares of ten millimetres.

The levels of the principal points, such as the mouths of the shafts, adits, bore-holes, points of connection of the galleries with the pits, and of the galleries with reference to an horizontal plan fixed and settled, shall be marked in metres and centimetres on these plans.

The Concessionnaire shall join to them on transparent paper a plan of the surface &c. (as above).

There shall be as many copies of these plans as there are of communes included in the undertaking.

The above-mentioned schemes, as also the plans in support in accordance with Article 3 of the Ordinance of 7 March, 1841, shall be, before any decision is arrived at, made known to the public in the forms and terms prescribed by the said article.

The bills shall be put up at the request of the Prefect and at the expense of the Concessionnaire.

Art. B².—(Special in case in which a proportional rent has been stipulated in favour of the owner of the surface.) The plans and the statement furnished in accordance with the preceding article shall include the drawing and the statement of the surface lands that the field of working is to comprise.

An extract of the declaration made by the Engineer of Mines shall, at the request of the Prefect and at the expense of the Concessionnaire, be posted up for one month at the door of the mayoralty houses in all the communes where the concession lies.

Art. C.—The Prefect shall refer these documents to be considered by the Engineers of Mines if it be found that the works contemplated may cause some of the wrongs or dangers anticipated as well in Title V. of the Law of 21 April 1810, modified by the Law of 27 July 1880, as in the sections II. and III. of the Decree of the 3rd January 1813. The Prefect shall notify to the Concessionnaire his opposition to the execution of the whole or parts of the said works. If the Prefect has made no

opposition within two months from the day of lodging the documents with the Prefecture, the execution of the works by the Concessionnaire shall be proceeded with.

Art. C.—(For salt mines.) The execution of the scheme of works shall be authorised if deemed advisable by the Prefect in the cases in which no claim has been made during the Inquiry above referred to. If it be otherwise the Minister of Public Works shall decide. If it be found that the works may cause some of the wrongs or dangers anticipated, as well in the Title V. of the Law of 21 April 1810, modified by the law of 27 July 1880, as in sections II. and III. of the Decree of 3 January 1813, the authorisation shall be given only after making the necessary alterations in the schemes.

Art. C¹.—(Special in case there is a proportional rent to pay to the owner of the ground.)

As soon as the Concessionnaire shall begin to extract under a new property, he shall be bound to advise the owner of the ground thereof. This owner will be entitled at his own expense to have on the mine an agent to verify the quantity of daily produce of the works.

Art. C².—(Special to salt mines.) No bore-hole for the working of salt by dissolution shall be allowed to be made within the boundaries of the concession at any horizontal distance of less than metres of all railroads built or to be built, and of less than metres from all canals established or to be established, without prejudice to the future application in case of need of the Article 50 of the Law of 21 April 1810, modified by the Law of 27 July 1880.

Art. D.—When the Concessionnaire wishes to open a new field of works or establish new pits or galleries from the surface, or to alter the mode of working previously followed, he shall address to the Prefect a general plan of the concession, a plan of the works, an explanatory statement, and a corresponding plan of the surface, the whole of it made out in accordance with what is prescribed in the above Article B.

This scheme shall be followed up as is prescribed in Article C.

Art. E.—In case the works planned by the Concessionnaire shall extend under or in the immediate vicinity of buildings, houses, or inhabited places, other works, roads, mineral springs, springs supplying towns, villages, boroughs, or public establishments, under canals or water streams, or at a horizontal distance

less than metres from their sites, the scheme of works will have to be previously submitted to the Prefect.

This shall be followed up in the manner prescribed by Article C. when the interested parties have been heard, and without prejudice to the future application in case of need of the Article 50 of the Law of 21 April 1810, modified by the Law of 27 July 1880.

Art. F.—In the vicinity of railroads it is forbidden to the Concessionnaire to work (for salt mines add “by galleries”) at any depth under a space of ground limited on the surface by two lines drawn parallel to the limits of the railroad and its dependencies, and to metres of distance from those limits, if he has not obtained the authorisation therefor by the Prefect, given on the report of the Engineers of the Mines, the Railway Company and control service having been heard.

Art. G.—Each year, in the course of January, the Concessionnaire shall forward to the Prefect the plans and sketches of the works made in the course of the preceding year. The plans shall be made out at the scale of one millimetre per metre, in order that they may be annexed to the general plans referred to in the preceding articles, and including all the details mentioned in the said articles, and shall be verified by the Engineer of Mines.

The Concessionnaire shall annex to them on transparent paper a copy of the plan of the surface prescribed for by the Articles B and D, including, with the alterations which may have taken place, the information mentioned in Article B.

Art. H.—When the Concessionnaire shall wish to abandon a portion of the underground works, he shall be bound to make a declaration thereof to the Prefecture, and to join to this declaration a plan of the works, as well as a plan corresponding with the surface.

It shall afterwards be proceeded thereon as is prescribed in Articles 8, 9, and 10 of the Decree of 3 January 1813.

Art. H¹.—(Special in the case in which a proportional rent is stipulated in favour of the surface-owners.)

The declaration of the Concessionnaire shall contain the description of the properties which correspond to the field of works it is proposed to abandon. An extract of this declaration, made by the Engineer of Mines, shall be posted up as is prescribed above in Article B¹.

Art. I.—The openings to the surface of pits and galleries which shall become useless shall be filled up or closed by the

Concessionnaire in the way which shall be prescribed by the Prefect on the proposal of the Engineer of Mines and at the request of the Mayors of the Communes of the district in which the openings are situate.

In case of default proceedings will be taken in accordance with what is said in article 10 of the Decree of 3 January 1813.

Art. I¹.—(Special to coal mines, lignite, and anthracite.) The débris and materials spontaneously inflammable shall be carried to the surface as the works are proceeded with, unless a special authorisation be delivered by the Prefect on the report of the Engineer of Mines.

Art. I².—(Special to mines of fuel.) The Concessionnaire must comply with the measures which may be prescribed by the Administration to prevent the dangers caused by the presence of inflammable gas and of its explosion in the mines, and bear the burdens which may for the purpose be imposed upon him.

Art. I³.—(Special to salt mines.) In cases in which the working of salt takes place by dissolution¹ the Concessionnaire shall be bound to execute all the works which shall be prescribed by the Prefect on the report of the Engineer of Mines for the purpose of ascertaining the position and the size of the excavations underground produced by the action of the waters.

Art. J.—The Concessionnaire shall constantly keep in order and up to date on each mine :

- 1st. The plans and sections of the underground works made out at the scale of one millimetre per metre.
- 2nd. A book stating the daily advance of the works, and the circumstances of the working of which it will be useful to keep a record, such as the nature of the deposits, their thickness, their quality, the nature of the roof and of the side walls, the measure of the waters running in the mine, &c. &c.
- 3rd. A book of daily control of the workmen employed in the works outside and inside.
- 4th. A book of extraction and of sale.

The Concessionnaire shall exhibit these plans and books to the Engineers of Mines each time that they shall require same.

¹ The mode of working by *dissolution* is that the mine is flooded, and the water is pumped out when the salt has dissolved in it.

The Concessionnaire shall transmit to the Prefect in the form and at the time which shall be named to him the list of the workmen, that of the produce extracted during the preceding year, and a detailed declaration of the net produce of the works liable to tax. (The prescription relating to the declaration of the net produce liable to tax does not apply to salt mines.)

Art. J¹.—(Special to cases in which a proportional rent is stipulated in favour of the landowners.) The plans and books mentioned in the preceding article shall contain an indication of the ground properties under which the working takes place.

Art. K.—(Special to cases in which the deposit lately conceded extends under grounds already conceded for the working of a mine of another kind.)

The Concessionnaire shall be bound to allow all the openings which may be made for the working of the mines of by the Concessionnaires of these mines, or even a passage through his own works, if it be found necessary, in return for an indemnity which shall be fixed by mutual consent or by experts.

In case of dispute as to the necessity or utility of these works, the Prefect shall decide on the report of the Engineer of Mines, the parties having been heard.

Art. L.—(Special to the case in which the deposit lately conceded should extend under grounds already conceded for the working of a mine of another kind.)

If the working of the deposits the subject-matter of this concession shows that they approach the subject-matter of the concession of _____, the Concessionnaire shall only be allowed to work such part of the deposits the extraction of which shall be found to be without prejudice to the mines of the concession of _____ situated in the vicinity.

In case of dispute on this subject, it shall be decided by the Prefect as is stated in the preceding article, and the Concessionnaire shall be obliged to comply with the measures prescribed by the Administration in the interest of the proper working of the two substances.

Art. M.—If the deposits to be worked in the concession of _____ extend out of this concession, the Prefect can order according to the report of the Engineers of Mines, the Concessionnaire having been heard, that a barrier should be reserved untouched in every deposit near the limit of the concession to prevent the workings from being put into communication with those that would take place in a neighbouring concession, and be prejudicial to one or the other of the mines. The thickness of these

barriers shall be determined by the order of the Prefect, who will regulate the reserve. The barriers shall only be cut through or worked in case the Prefect, after having heard the Concessionnaire interested, and on the report of the Engineers of Mines, shall have authorised the work and directed the way in which it is to be executed. In case the usefulness of these barriers should have ceased, a decree of the Prefect will permit the Concessionnaire to work the part which belongs to him.

Art. N.—In case it should be considered necessary to execute works with the view of putting into communication the mines of two concessions for ventilation and for drainage, or to open means of ventilation, drainage, and assistance to the neighbouring mines, the Concessionnaire shall be obliged to permit the execution of such works, and to participate in them in a proportion of his interest.

These works will be ordered by the Prefect on the report of the Engineers of Mines, the Concessionnaire having been heard.

In an urgent case the works may be commenced on the simple requisition of the Engineer of Mines of the Department, according to the Article 14 of the decree of 3 January 1813.

Art. O.—If some deposits of other foreign minerals than those included in the area of the concession of are legally worked by the owners of the soil, or become the subject of a special concession granted to third parties, the Concessionnaire of the mines of shall be bound to permit the works which the Administration may judge to be useful to the working of such minerals, and even, if it is necessary, give free passage through his own works in return for an indemnity, the amount of which would be determined by mutual agreement or by experts.

Art. P.—(Special to mining concessions in Algeria.)

The Administration guarantees to the establishments of the Concessionnaires, of which the sites and plans have been fixed between them and the military services, the protection which it grants to all the establishments of settlers.

If the sites and plans fixed necessitate special defensive works, these works will be executed at the expense of the Concessionnaire. The Concessionnaire must provide the barracks for a garrison to be determined on the demand of the Concessionnaire if the military authority judges this garrison to be indispensable.

In the case provided for by the preceding paragraph, the general commanding the division of or his delegates will be judges of the expediency of the measures to take from a military point of view.

CHAPTER V.

FRENCH COLONIES.

NOTES AS TO MINING LAW.

ALGERIA.

A LAW of the 16th June, 1851, upon the constitution of property in Algeria declares (Art. 5) that the *mines* and *minières* are governed by the legislation of France ; and it may be observed that the model Form of Act of Concession before set out contains an article (Art. P) specially applicable to concessions of mines in Algeria.

FRENCH GUIANA.

By a decree of April, 1858, the French mining law of 1810 is specially applied to French Guiana with certain exceptions, *e.g.* a simple decree, in place of a decree delivered in the Council of State, is sufficient for the granting of a concession or any similar measure in French Guiana ; whilst various substitutions of officials and other modifications of the actual French law have been introduced in order to adapt it to the requirements of the colony. Special regulations were also established in 1881 and 1882 with respect to searches for and working of *gold*, which is the staple mineral product of the colony. These regulations bear a strong resemblance to the Gold Ordinances of Dutch Guiana (referred to p. 209 *post*) ; but the permissions to explore and to work in French Guiana are limited to areas of 5,000 hectares, and permissions to work are granted in the first instance for a period of nine years only, which period is, however, renewable indefinitely. The permissions to work also involve the payment of fixed and *ad valorem* royalty taxes, to be fixed each year for the following year by the Governor.

NEW CALEDONIA.

The colony of New Caledonia, which appears to be possessed of considerable mineral wealth (in nickel, copper, cobalt, antimony, &c.), has, following the example of its neighbours in

Australia, made frequent alterations in its mining legislation in recent years. At present the subject seems to be regulated by a decree of the 22nd July, 1883, which assimilates the law of the colony to that of France, although some discrepancies still exist, attributable to differences of situation, organisation, established rights and customs, &c. A somewhat special feature of the law also is that if mines are not being actively worked (that is to say, employing at least four workmen per 100 hectares) they are to pay a tax of 10 francs per hectare instead of the tax of 3 francs per hectare payable by mines that are being actively worked, under risk of forfeiture for non-payment of the tax.

FRENCH POSSESSIONS IN INDIA.

A decree of the 25th November, 1884, which regulates the law as to mining in these possessions, is understood to be modelled upon the decree of 1883 for New Caledonia.

TUNIS, ANNAM, TONQUIN, &c.

The general principles of the French mining legislation are gradually being applied to Tunis, Annam, Tonquin, &c., over which France has assumed a protectorate.

CHAPTER VI.

GERMANY.

NOTES AS TO MINING LAW.¹

THE old German mining law seems to have depended on a variety of laws, regulations, and customs which together made up what is known as the "Common German Mining Right" (Gemeines Deutsches Bergrecht).

This common German mining right seems to have combined the principle of possession by the first occupant with the right of the Crown to grant concessions, and to impose a tax on the produce of the mines. As regards the proprietors of the soil the regulations were very diverse. Some gave nothing to the owners of the soil; others gave them a certain proportion of the produce; others gave them the right to certain shares in the adventure (Erbkuxe). The greater part of the regulations gave a certain proportion to schools and churches as well as to relief funds (Freikuxe).

The existing state of mining legislation results from various codes or laws drawn up at different dates in the present century, the principal of such laws being the Prussian Mining Law of 24 June 1865, which is said to be rather a consolidation of old laws than a new law properly speaking, and which has been adopted more or less completely by twelve out of the twenty-six States constituting the Empire of Germany, and which twelve States are said to comprise eight-ninths of the surface and nine-tenths of the mineral production of the whole Empire. These States are Alsace-Lorraine, Anhalt, Bavaria, Brunswick, Hesse-Darmstadt, Prussia, Reuss (younger branch), Saxe-Altenburg, Saxe-Coburg-Gotha (but for Gotha only), Saxe-Meiningen, Waldeck Pymont, and Wurtemberg.

Three States, the Kingdom of Saxony, the Grand Duchy of Saxe-Weimar, and the Principality of Schwarzburg-Sondershausen, follow another type of legislation which is adopted from the legislation of the first-mentioned of these States.

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¹ The writer wishes to acknowledge the assistance he received in the preparation of this set of notes from Herr Abels, one of the Royal Inspectors of Mines at Saar-bruchen, in Germany.

The eleven other States, which are of little importance from a mineral point of view, have adopted legislation founded more or less on the two principal types and the common German mining right.

The Prussian Mining Law of 24 June 1865 is divided into 250 paragraphs or articles. This law is founded on the principle of the liberty of working mines by the first occupant, and treats such mines as come within the scope of the Act as being free from control on the part of the owner of the soil; it gives the free right of search to every one and everywhere (subject to certain restrictions for the protection of buildings and inclosed grounds), and gives the exclusive right of working either to the first finder or to the first petitioner, and continues the right, subject to regulations and inspection, unless some motive of public interest justifies interference. The right of mining is made an immovable property, altogether distinct from the right to the surface, as in the French legislation.

The following table shows the general division and rights of property in and to rents of minerals in Prussia and in the German States following the Prussian Mining Law :—

As to
Prussia
and the
11 other
States
adopting
a similar
law.

CLASSIFICATION OF MINERAL SUBSTANCES.

Mines	Ownership	To whom taxes or royalties payable	Remarks
I. Gold, silver, mercury, iron (with the exception of iron found in marshes), lead, copper, tin, zinc, cobalt, nickel, arsenic, manganese, antimony, sulphur, aluminous and vitriolic minerals, coal, lignite and graphite, salt, and salt springs.	Usually in the <i>first finder or claimant</i> (instituted by the Government) or his assigns.	<i>To the Government</i> , ordinarily <i>two per cent. on the gross produce</i> of the mine. Certain payments have also to be made to the miners' benefit funds (Knappschaftskasse). In some instances royalties are payable to private individuals under old laws kept in force by the modern Mining Acts.	This is the general effect of the Prussian Mining Law of 24th June 1865, which has been followed in most of the important mining States in Germany. In some of such States, however, the rents are reserved on different principles: <i>e.g.</i> , in Bavaria, where a small fixed rent of about 3 <i>d.</i> per hectare is reserved, and the tax on revenue from mines is valued and collected in the same manner as the tax on income from other sources; and in the Duchy of Saxe-Coburg-Gotha, where the rent varies as regards manganese, whilst all other mines pay 4 per cent. on the gross products.
II. All other metals and minerals.	<i>In surface-owner.</i>	If let, <i>to the owner of the surface.</i>	

In certain regions of *the Province of Pomerania*, only salt mines and salt springs are excepted from the free disposition of the owners of the surface (Art. 210 of Law of 1865), and, of the other mines, only workings of lignite are subjected to Government inspection.

Iron mines in the *Province of Silesia, the County of Glatz, Lower New Pomerania and in the Island of Rugen*, as well as in the *District of Hohenzollern*, also belong to the proprietors of the surface (Art. 211).

In the *Duchy of Saxe Altenburg* the working of coal (including peat, lignite and graphite) belongs exclusively to the proprietor of the soil.

In *Waldeck* slate is added to I., and brine springs included in the Principality of Pyrmont.

In *Banaria* graphite and gold washings are excluded from I., but iron found in marshes is not excepted.

In *Brunswick* vitriolic minerals are excluded from I.

In *Alsace-Lorraine* bituminous substances are added to I., and iron-ore which can be worked open-cast without rendering subterraneous workings impossible is excluded.

In *Saxe-Meiningen* and *Reuss* (younger branch), slates and colouring earths are added to I.

No provision is made by the Prussian Law of 1865 for payment of royalties to the owners of the surface in respect of the mines which are the subject of concessions. It is to be remarked, however, that the law did not repeal laws previously in force respecting royalties and imposts on mines, which laws were on the contrary explicitly maintained in force by the 2nd paragraph of section 11 of the Law of 1865. This would seem to keep in force the "redevances trefoncières," which were payable in respect of the provinces on the left bank of the Rhine under the French Law of 1810, and the provisions for the benefit of certain owners of the surface, and of schools and churches under the old regulations previously referred to, in respect of the provinces on the right bank of the Rhine.

In some parts of the Empire, the old owners of the Crown rights (such as mediatised princes) or private companies, receive either one-half of the 2 per cent. tax or higher taxes founded on private titles, *e.g.* :—

In Westphalia.—(a) The Duke of Aremberg (at Recklinghausen) receives 1 per cent. of the gross coal production from eleven collieries, amounting in 1890 to a sum of at least 200,000 marks.

(b) Two collieries near Mulheim-on-Prater pay 5 per cent. of their gross produce to a company which acquired the rights of the ancient Land-graf of Broich, and five other collieries have redeemed the royalty, paying altogether a sum of 1,789,500 marks.

In Silesia.—The Lady Thiele Winkler receives 4 per cent. of

the gross produce of coal at Myslowitz, Kakowitz, in Upper Silesia, amounting to a considerable sum.

The worker of mines has the right to occupy, under the sanction of the Administration, land necessary for his working (except residences, private buildings, and courts adjoining) at an annual rent, except where the land is purchased. The worker cannot force the surface-owner to sell, but on the contrary the latter can require the former to buy the land if it is occupied or certain to be occupied for more than three years (Art. 13), and, in the case of sale, the surface-owner has a right of pre-emption in case the land is no longer required for the working of the mine. The rent or the purchase-money is calculated according to the actual damage caused, and, where there is only a temporary occupation without purchase, the worker of the mine may be required to give security against permanent damage. Disputes are settled by deputies appointed by the Administration of Mines and the Government of the Provinces, and recourse may also be had to the legal tribunals (Arts. 142 to 145).

The worker of the mines is also (Art. 148) entirely responsible for all damage caused to the surface by his workings whether by his fault or not, but he is not responsible for damage to buildings which are erected in the face of his working (Art. 150).

These are regulated by the ancient law, and are in Prussia all reduced to an impost of 2 per cent. on the value of the gross products of the mines. This value is fixed officially with power for the workers of the mines to show the actual value by producing the results of their sale of the produce of their mines. The impost consists, on the right bank of the Rhine, of two parts, viz., of the rent of 1 per cent. substituted for the old royalty payable to the Crown, and of 1 per cent. in respect of the right of inspection established by a law passed in 1851. The latter portion of the impost is payable in all cases, whilst mines which are subject to the payment of a tenth part in favour of a private proprietor of the Crown rights are exempted from the payment of the first 1 per cent.

In the year 1890, the total amount of mining tax (2 per cent. of the produce) paid to the German Government was 7,742,459 marks = £387,123. The sum paid to private proprietors of Crown rights in the same year is estimated at 500,000 marks = £25,000.

On the left bank of the Rhine the Legislature has substituted (by Art. 6 of the Law of 20th October 1862) the principle

of a 2 per cent. rent on the gross produce for the proportional rent on the net produce payable to the Government under the French Mining Law of 1810.

The bases on which the impost rests are somewhat intricate, but in practice the matter is regulated by Ministerial instructions of the 23rd November 1864 (a copy of which is set out in Sir E. B. Malet's report from Berlin of 13th November 1886), for the left bank of the Rhine, and of the 29th January 1866 for the right bank. It is said that a revision of the legislation on the impost on mines is generally considered to be a pressing necessity.

As gross produce or output is considered all produce of the mine actually sold or used for the consumption of the mine itself or by the owners (*see* M.L. of 23rd November 1864, § 2).

Besides the special mining tax, the mines have to pay considerable sums for local rates and State taxes. The total charges in the case of coal mines are stated to exceed 10 per cent. of the selling value of the minerals. The following table, showing the sums actually paid by a particular colliery in Westphalia, for the years 1889 and 1890, illustrates what these charges in practice amount to.

TABLE SHOWING CHARGES IN A GERMAN COLLIERY.

	1889	1890
	Marks	Marks
1. Mining land and building tax .	33,074·71	58,601·30
2. Local rates	12,693·08	29,765·80
3. Compulsory payments to relief and accident societies	121,972·82	139,062·93
4. Contributions to Chamber of Commerce	63·00	63·00
Contributions to common mining fund	1,438·40	1,411·20
Contributions to Association . .	312·00	520·00
	169,554·01	229,424·23
Or per ton of the sold production .	0·49=6 <i>d</i> .	0·64=7½ <i>d</i> .

In future the profits of mining undertakings will also be subject to the payment of a heavy income tax.

Searches for mines can be made by any one and anywhere except under private buildings and their appurtenances and in their immediate vicinity for a distance of 62^m.8. The explorer, however, is required previously to indemnify the proprietor against damage which he may cause to the ground, and to give security against subsequent damage.

In case the proprietor of the soil refuses to allow searches to be made, recourse may be had to the Administration of Mines, who will authorise the searches, unless motives of public, as opposed to private, interests stand in the way; but sometimes it is difficult to distinguish private from public interests—for instance, in a case where the search might threaten to make a spring necessary for agriculture disappear, or might injure a forest of which the preservation might be of public interest.

The right to work a certain substance within a particular area is given by way of preference to the discoverer, that is to say, to the first person who has communicated the fact of his discovery of a deposit during the week of the discovery; in default of which it is given to the first person who has petitioned for it in conformity with the prescribed rules. The Administration has not to consider whether the mine is workable or not, though it has the right to ascertain whether there is really a vein of mineral or not (mere traces of a substance would be insufficient to establish the right to a concession); but if the existence of a deposit (*gisement*), that is, a bed or a vein or a mass of mineral, is established, the discoverer, who has made a legal demand within a week from the date of his discovery, or in default, the first regular petitioner in order of date, has a right to obtain the property in the mine.

An exception to the rule, however, is in the case of a substance which is discovered lying in such connection with a substance already conceded that the Administration consider that the two substances should be worked together, in which case the concessionnaire has a right of preference over the discoverer to a concession of the newly-discovered substance (Art. 55). In case of disputes as to the right to a concession it is for the judicial tribunals to decide between the rival claimants.

The claimant has to fix the form and extent of the field to which his claim gives him the right, on the double condition, as a rule, that it shall not exceed 219 hectares, and that any two boundaries shall not be at a greater distance from each other than 4,185 metres. Occasionally, however, these limits are varied even in Prussia, and many of the States following the Prussian Law in other respects have adopted different limits. Besides the new square fields there are various old ones

of smaller size. Most of the owners of the old fields have, however, taken advantage of the new law to transform and enlarge their fields to the new size, so far as the neighbouring fields would allow.

No investigations are made before granting the concessions as to the means or other personal qualifications of applicants as is done in France.

Every person or company can, by means of the proper legal forms, acquire an unlimited number of concessions. It cannot be stated how many concessions of mines are at present granted in Germany; and it is said that the number would be of no practical value, as, perhaps, nine-tenths of the concessions possess no value, and a great many are exhausted. In the Westphalian district the number of coal mines at work in the year 1892 was about 180, but the number of concessions granted there certainly exceeded 1,000, of which about 600 might be actually worked.

The institution or concession carries with it the right to work and dispose of the minerals mentioned in the concession within a certain specified district. The property is entirely distinct from that of the surface. It is considered an immovable (that is, real) property (Art. 50), and may be alienated (Art. 52), and the worker may carry on his works subject only to the prescribed regulations. It is a common practice for concessionnaires to sell or let their concessions to companies who undertake the working of the mines.

Thus, in the year 1890, the Hibernia Company bought a concession of coal near Bochum (on which no outlay whatever had been made beyond the original expense of boring to prove the existence of coal) for 2,000,000 marks=£100,000.

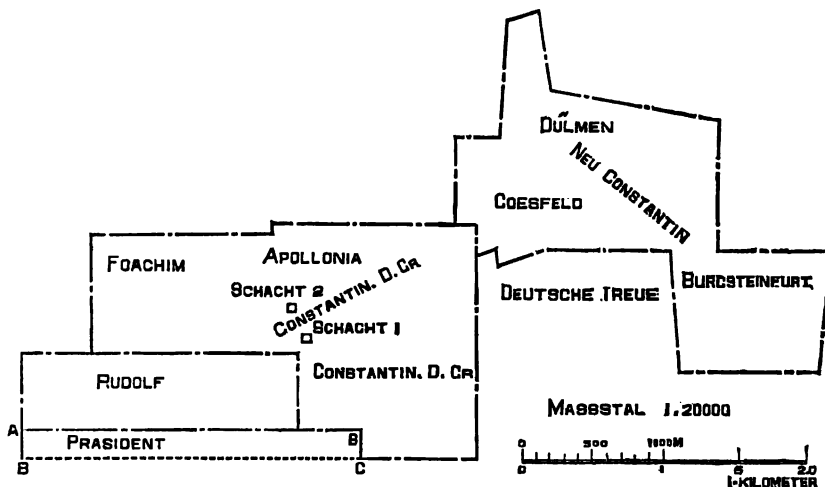
The case of an entire concession being given in lease seems to be rather unusual in Germany, though instances are to be found, such as the lease of the colliery Carolus Magnus, near Borbeck, to the Company Phoenix; another of the colliery Hert to Mr. Krupp, of Essen; and a third, the lease of the concession Rudolf to the Colliery Company Constantin the Great, near Bochum, mentioned below.

On the other hand leases and exchanges of adjoining parts of concessions between neighbouring collieries are of frequent occurrence.

¹ For further particulars of dealings with mining concessions in Germany, see evidence of Mr. P. A. Scratchley, managing director of the Wolfhart Lead Mines, given to the Mining Royalties Commission.

The mode in which concessions are dealt with in Germany may be well illustrated by the case of one of the best collieries in Westphalia, Constantin the Great, of which a sketch (showing the colliery field) is given below. The colliery is owned by a Gewerkschaft Society (divided into 1,000 kuxe, or shares), the field being composed of three original concessions already extensively worked, and united with three other original concessions not worked as yet, to which have been added a further concession (Rudolf) taken on a kind of lease (an extract from which, marked A, is given below), and part of another concession (President), taken on another kind of lease (an extract from which, marked B, is also given below). It will be seen that another concession which does not at present belong to the company, and which is marked as "Deutsche Treue" on the plan, intervenes rather inconveniently with the field; and it is stated that the company are contemplating the purchase of this intervening concession, but have not been able to buy it hitherto in consequence of the high price which is being asked for it.

PLAN SHOWING CONCESSIONS BELONGING TO A COLLIERY NEAR BOCHUM.



A. **ESSENTIAL EXTRACT** from a **LEASE TREATY** still in force concluded between the Colliery Company of United Constantin the Great and the Mining Company of the Coal Concession Rudolf (not worked yet) at Bochum, concluded on the 13th May, 1870 (*see annexed plan*).

1. Rudolf cedes its concession to Constantin the Great on lease. Constantin is obliged to prepare, and explore the said coal field in every level of its own mine.

2. Constantin charges itself with the extraction and the sale of the coal, and provides all the preparation and materials necessary for the purpose.

The representative of Rudolf is always entitled to inspect the account books, and see over the mine above and underground.

3. Constantin has to manage the working, and to represent the mine against the Mining Office.

4. Constantin must extract at least 50 tons of coal a day in average of every half-year, unless force major hinders the extraction. Hindrance must immediately be communicated to the representative of Rudolf, and must be removed as soon as possible. If, through fault of Constantin, the due output is not produced, one-half of the average profit is to be paid for the difference.

5. Constantin accounts for the revenue out of the Rudolf mine every half-year; profit and contribution are divided between the two companies in equal parts. The selling price is calculated on the average of the entire output of shaft 1 of Constantin; the special cost in the same way, the general costs (of administration, engines, &c.), are divided in proportion to the coal produced out of the two mines.

6. The western part can be extracted by shaft of Constantin on the same conditions.

7. The safety barriers between the respective fields drop with consent of the Mining Office.

8. Surface damages above the field of Rudolf are carried one-half to each company.

9. This treaty shall be abolished, if through water or other forces the working of the Rudolf concession shall become impossible or disadvantageous.

10. In that case new safety barriers must be established half at the cost of contractors.

11. In the same case the installations, &c., made for the working of Rudolf, remain its property pro rata of the mutual coal produce during the treaty; but Constantin can acquire the portion of Rudolf at a price valued by experts.

12. The treaty is to be inscribed into the Mining Hypothecary Book at Dortmund.

B. TREATY of the 1st December, 1879, between the "GEWERKSCHAFT CONSTANTIN the GREAT" and the Limited Company, proprietor of the Colliery President near Bochum, in Westphalia, concerning the lease of a small part of the latter concession.

1. The Bochum Mining Company gives the part of its field indicated A, B, C, D, on the annexed plan in lease to the Gewerkschaft Constantin the Great, in order that the latter shall be entitled to work and sell all the coal contained in the said part above the second level of Constantin.

2. The old safety barriers are annihilated, and new ones adopted with the approbation of the Mining Office.

3. The coals taken by Constantin out of the leased field are to be paid for on the following sliding scale, for which the average selling price at the pit-mouth at the shaft 1 of Constantin serves as the base.

From a selling price lower than:—

50 m. to	60 m. per 10 tons	is to be paid	5 m.
60 „ to	70 „	„ „ „	6 „
70 „ to	80 „	„ „ „	7.50
80 „ to	90 „	„ „ „	9.50
90 „ to	100 „	„ „ „	12
100 „ to	110 „	„ „ „	15
110 „ to	120 „	„ „ „	18
120 „ to	130 „	„ „ „	22
130 „ to	140 „	„ „ „	26
140 „ to	150 „	„ „ „	31
150 „ to	160 „	„ „ „	36

These coals must be distinctly referred to in the working registers. The manager of the Bochum Company is authorised to inspect the registers and account books.

4. The payment is made on the 25th of the following month.
5. The underground workings to begin instantly and to continue without interruption conformably to the mining rules.
6. Unavoidable interruptions of the extraction are to be communicated to the other side, and must be removed as soon as possible.
7. Constantin the Great takes all the risk and responsibility of surface damages.

Several mines may be united, each retaining their independent entity, or (with the consent of the Administration, which cannot be refused, but is given subject to regulations as to the rights of creditors) may be consolidated into one mine. There is absolutely no guard against companies enlarging their holdings through purchase of other undertakings; in fact, this is proceeding very rapidly in all the German coal fields without check, and it is stated that concessions of all the coal fields which are capable of being worked at the present time were all taken up years ago, and were never worked by the original concessionaires, but are generally in the second or third hands. No one starts mining with less than three or four concessions, which are generally worked by companies, either private or public. The original concessions were granted to persons who had proved the existence of coal by borings which cost from 15,000 to 30,000 marks = £750 to £1,500. The borings were often made by companies, and these have again been incorporated into *mining* companies, the shares of which can of course be sold, though as a rule many of the original shareholders still remain the same. Many of the original concessions have been united into one company, and in some cases concessions have been bought or taken on lease by companies, though this is the exception rather than the rule. There are two forms of mining societies. The usual form is called a *Gewerkschaft*, divided into a hundred or a thousand shares, called *kuxe*.

Union
and con-
solidation
of
mines.

This form of company appears to correspond exactly with the cost-book form of company in England, and is said to work very satisfactorily. The other form of mining society is called *Actiongesellschaft*, which seems to correspond exactly with an English limited company. The shares in both these kinds of societies are publicly quoted for sale in the Stock Exchange quotations, and are frequently sold, so that the ownership of concessions is constantly changing, not as regards the whole, but as regards fractions of the whole.

Concessions may be forfeited if imperious motives of public interest require it (Art. 65); but though there would appear to be a considerable number of mines unworked, and the application of the clause has been frequently demanded, it is stated that the Prussian Administration has refused for the last twenty years to make use of it. But if such a forfeiture is proposed to be made, the creditors have the right for three months to sell the mine.

The concessionnaire may within the area of his concession carry on all necessary works, conforming as regards his relations with the owners of the soil to the provisions of the law. He may also carry on certain works of ventilation and drainage, for the more profitable working of his mine, under land outside the area of his mine which is not the subject of any other concession, and even in lands which are the subject of other concessions as long as he does not endanger the workings of the other concessionnaires.

Easements of way, water, &c.

He has also the right to employ for the purposes of his works substances which are not the subject of his concession, but which are detached in working his mine. If he does not employ them in his mine he must deliver them to the proprietor of the soil (Art. 57).

A concessionnaire can also obtain the possession of ground even outside the limits of his concession for the conveyance of minerals, but must not interfere with dwelling-houses, manufactories, farm buildings, or yards. The expropriation must be made through the Mining Office (Oberbergamt) and the provincial administration, who fully inquire into the necessity for and the conditions of the expropriation, and fix the rent or the price to be paid, the landlord being entitled to require the land to be bought out if the occupation is going to last more than three years, or is likely to be permanently injured, the price paid being usually much beyond the ordinary value of the land; but both parties have power to appeal to the Minister of Commerce and Agriculture.

The mines in the Saar-bruchen coal-mining district generally belong to the Government, and are worked as part of the Crown

Government Mines. property. The explanation of this fact is that Saar-bruchen was formerly in the Duchy of Nassau-Saar-bruchen, an independent principality, in which the mines were reserved to the Crown. After the duchy became part of the German Empire the Government continued to work the mines, but on the passing of the Act of 1865 the Government took out concessions, just as a private individual would have done with just the same incidents, except of course that the Government does not pay the mining tax to itself. Some concessions in the district, which the Government probably did not think it worth while to take up, have been taken up by private individuals.

Insurance of workmen employed in mines against *sickness* and *accidents* is compulsory; as to the former under **Accident and relief societies.** a law of 15 June 1883, and as to the latter under a law of 6 July 1884, the two classes of insurance being kept separate.

The Law of 1884 provides generally for the formation of trades unions (or Knappschaftsvereine) in the different business districts throughout the empire, for the purpose of carrying out the provisions of the law as to insurance, and for the conduct and regulation of their procedure.

For the purpose of carrying the Insurance Law of 1884 into effect, a general union for the whole of Germany was started in 1885. The name of this union is "The Miners' Trades Union," and the head office is in Berlin, and the range of this union is divided into eight sections, comprising different mining districts of Germany. Other districts, such as the district of Bochums, have their own "trades union" for carrying the law into effect, with special statutes or regulations for the conduct of their business. According to these, it would appear that the contributions of the mine-owners vary from 75 per cent. of, to an equal amount with, that of the workmen. The actual amounts paid also vary, but the average amount paid by the mine-owners appears from the following table to be equivalent to $\frac{11}{100}$ of 1s., or 1 $\frac{1}{2}$ d. per ton of minerals raised in Prussia.

Year	Tons raised in Prussia	Contribution to fund in shillings	Per ton of minerals in decimals of shillings
1883	69,222,259	6,892,446	0.099
1884	70,643,871	7,127,320	0.109
1885	71,713,132	7,527,479	0.104
1886	71,002,166	8,173,265	0.115
1887	73,782,426	9,258,235	0.125
1888	79,482,825	9,465,616	0.119
Total	435,846,679	48,434,361	0.111

By a law of June 22, 1889, provision is also made for compulsory insurance of workmen for maintenance in case of old age and infirmity, which adds considerably to the cost of insurance.

Special provisions are made by Art. 196 of the Law of 1865 for inspection and regulation of mines, having in view : 1. The safety of the works; 2. The protection of life and health of the workmen; 3. The protection of the surface; 4. Protection against workings which might be detrimental to the public interests.

Inspection
and regu-
lation of
mines.

The task of carrying into effect the provisions of the mining law is entrusted, in the first instance, to an official in each mining district, who is called the *Revierbeamte*; and, in the next place, to a Council called the *Oberbergamt*, of which there are five in Prussia, having under each of them a certain number of districts. The *Oberbergamte* again are under the authority of the Minister of Public Works. There is a power of appeal from the *Revierbeamte* to the *Oberbergamt*, and from the latter to the Minister of Public Works, and in this country the mining authority *alone* (and not, as in other countries, in conjunction with the civil authority) has entire jurisdiction in matters relating to mining, except as regards surface damage.

Mining
Adminis-
tration.

The Mining Law of the 24th June 1865 has lately been revised and added to by a law of the 24th of June 1892, especially with respect to the relations between employers and workmen, working regulations, engagement and dismissal, stipulations as to wages, fines, &c. It may also be mentioned that under a law of 1890 (not special to mining), Industrial Courts may be established with the view of facilitating the settlement of differences between employers and employed, and any such Industrial Court may convert itself into a Board of Conciliation when appealed to by both parties. In the mining districts the expense of organising the Industrial Courts is borne by the State, and it is understood that five such Courts have recently been appointed for the principal mining districts of Germany.¹

Recent
legislation.

Coal and coke free; pig-iron 6d. per cwt.
(Return of Foreign Import Duties, presented to Parlia-
ment September 1893).

Import
duties.

¹ See Vol. V. of Foreign Reports of Labour Commission.

AS TO THE KINGDOM OF SAXONY AND THE GERMAN STATES FOLLOWING THE SAXON MINING LAW.

The modern Saxon Mining legislation is for the most part contained in a law dated the 16th of June 1868. It is only intended here to refer to the chief points in which this law differs from the Prussian Mining Law.

The essential difference is in the classification of minerals, as the Saxon Mining Law leaves *to the owner of the surface* the right of working *coal and lignite* (1868, Art. 4). This right can only be exercised after a notice given to or permission given by the Administration, which cannot, however, be refused unless the working area is insufficient. On the permission being given, the mine becomes a separate property from the surface, and can be disposed of separately and is subject to inspection, &c., as if it had been the subject of a concession. The laws of Saxe-Weimar and Schwarzburg-Sondershausen, which follow on the Saxon Law, are fixed respectively by laws of the 22nd June 1857, and the 15th February 1860.

No rents are payable to the owners of the surface in respect of the mines which are reserved from their ownership
Royalties. or right of working.

The taxes payable to the State in the Kingdom of Saxony appear to be fixed by a special law of 10th October 1864, and to be in the form of a fixed royalty amounting to 120pf. = about 1s. 3d. per annum per unit of 4,000 square metres for mines of gold and silver, and 80pf. = about 10d. per annum per unit of 4,000 square metres for other mines, with the usual tax upon industrial revenue payable in respect of the income of mines.

In Saxe-Weimar and Schwarzburg-Sondershausen, on the contrary, the mines have to pay a tax on the gross produce, as in Prussia, but which is at the rate of 5 per cent., instead of 2 per cent. They also pay small fixed rents amounting from 15pf. to 25pf. per hectare.

These, which in Prussia are free to all, can in Saxony only take place by the previous sanction of the mining authority.

Searches. Such sanction is, however, usually granted to the first applicant, is available for a year (which may be prolonged for six months), and extends to a particular area not exceeding ten hectares in extent. The warrant to search can during its duration be exchanged into a definite right of working. The relations between the explorer and the surface-owner are similar to those established under the Prussian law.

These are granted, not necessarily, as in Prussia, to the first finder, but to the first claimant, and if several claimants present themselves simultaneously, that is on the same day, **Concessions.** the concession is granted to them in common. It is necessary to prove the existence of a deposit, but the proofs required are not so strict or complete as in Prussia. The areas which can be taken are four hectares for superficial mines, and 4,000 square metres for other mines. Each mine of the last-mentioned extent should employ at least two workmen working eight hours per day, excepting Sundays, and larger mines should employ a greater number of men in certain specified proportions.

OTHER GERMAN STATES.

As for the other eleven States of the German Empire, their mineral legislation is not of sufficient importance, and their mineral property is not of sufficient value, to make it worth while to study their mining laws in detail. It is stated that five of them do not possess any mines, that in another (Baden) the mining industry is without interest; that the mines are regulated by laws inspired by the Prussian Code in two States, and partly by that code and partly by the Saxon Code in two other States, and that finally one State (Oldenburg) has preserved the French Law of 1810.

CHAPTER VII.

AUSTRIA-HUNGARY.

NOTES AS TO MINING LAW.

THE old Austrian mining law seems to have depended, like the History of old German mining law, upon a number of regulations applicable to different districts, supplemented by the common German mining right.

The old mining law of Austria and Hungary was, however, codified and united by the Law of 23 May 1854, which explicitly repealed the ancient law both written and customary, maintaining, however, rights of mining acquired under the ancient law. Some alterations have since been made in the law, and others are projected.

The general mining law—"das allgemeine Berggesetz," *i.e.* the one common mining law of the Austrian Empire—is in force in Hungary.

The "Judex-Curial" Conference, however, recognised certain points of difference in the law as applied to Hungary. The most important of these points regards the working of coal mines, which cannot in Hungary be worked without the permission of the owners of the land.

The remaining differences are concerned chiefly with the forms of procedure in the mining offices, with the entries in the mining registers (*Bergbücher*), and with the jurisdictions of the Courts.

Although the Austrian mining law was passed nine years earlier than the Prussian mining law of 1865, the two laws have considerable resemblance to each other, being both to some extent evolved from the ancient German mining right. There are, however, extensive differences in detail between the two laws.

The Law of 1854 consists of 286 paragraphs or articles. It gives the working of such mines as are reserved from the ownership of the surface proprietor, not to the first occupant, as in Prussia, but to the first claimant who proves the existence of a workable field. If several claimants present their petitions on the same day, the mine is granted to them in common, unless they can agree to divide it (Art. 53). The right of search is

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¹ The writer wishes to acknowledge the assistance which he received in the preparation of this set of notes from Mr. W. B. Wilberforce, proprietor of the Rabenstein gold mine at Sarntal, Tyrol.

not, as in Prussia, free, but can only be made by permission of the mining authority. A peculiarity of the Austrian Law is that the worker of the mines has the right to work all the substances reserved from the ownership of the soil within the limits to which his concession extends (Art. 123), and not, as in France and Prussia, some particular substance specified in the Act of Concession only. The right of mining, as in France and Prussia, is an immovable property wholly distinct from the ownership of the surface. Another peculiarity is the division of the reserved mines into two classes, called deep workings (Grubenmasse) and surface workings (Tagmasse), respectively, as to which classes different regulations apply.

Practically the same substances are reserved from the ownership of the surface in Austria as in Prussia, but the definition in Austria is indicative rather than specific, as in Prussia, and cannot therefore be conveniently stated in tabular form. The substances reserved are such as are capable of being used as metals, sulphur, alum, vitriol or salt (the latter being a State monopoly), vitriolic springs, graphite and bitumen, and all kinds of coal and lignite (Art. 5); all other substances belong to the proprietor of the surface, and by exception from the general law in Galicia, Cracovia, and Bukowina the right of searching for and working minerals, oils and ozokerit, and all bituminous substances except coal, belongs to the owners of the surface, and, as before observed, in Hungary coal cannot be worked without the permission of the owners of the surface.

No rents are payable to the owners of the surface in respect of the reserved mines themselves.

The worker of the mines has the right to occupy such portions of the surface as are necessary for him under the supervision, and in case of dispute by means of the intervention, of the Administration, on paying a simple indemnity if the use is only to be temporary; but he must proceed by a regular system of expropriation, and buy the land, if the occupation is likely to be lengthy. He has a right to buy land and water rights for all purposes of his works either within or outside the limits of his field. In case of disputes the mining authority determines, in union with the "political" authority, on the necessity for the occupation and the situation and extent of the lands to be occupied. The indemnity is fixed by experts, and the occupation may take place on payment of the sum fixed. Buildings, inclosed courts, gardens and inclosed grounds are excepted from the lands which may be taken, and the restriction extends to a radius of 38 metres round the buildings.

The worker of the mines has to repair all damage occasioned to the surface by his workings, but is not liable in respect of buildings and erections established within the limits of his mine without the consent of the authority.

The taxes payable to the Government by the Act of 1854 were partly fixed and partly proportional upon the gross produce of the mine, the fixed taxes being at the rate of only four florins (say 8s.) for each Freischürf Grubenmass or Tagmass and for each "mine-measure," and even this amount may be reduced for very poor or broken-up mines, the mining authorities having the power to reduce the payment on each Freischürf from four florins to two florins.

Taxes payable to the Government.

The tax on the gross profits has been repealed by a Law of 28 August 1862, which has substituted for it a tax upon revenue fixed in principle at 5 per cent. on the net revenue, to which has since been added three-fifths by virtue of the law of 26 June 1868, or 8 per cent. in all.

All businesses in Austria pay an income tax to the Government of 5 per cent. on the *net profits*.

There is also a payment to be made towards the "Land"; *i.e.*, the general fund of the province in which the business is being carried on.

There is a further payment to be made towards the local funds.

These two last payments vary according to the necessities of the provinces and parishes. Under unfavourable circumstances a business (mines are considered as such) may have to pay

- (1) 5 per cent. to the central government.
- (2) 5 per cent. to the "Land" or province.
- (3) 5 per cent. to the parish.

In all 15 per cent. of the net profits.

N.B.—(2) and (3) are levied by the Provincial Parliament.

Searches for mines cannot be made even by the owner of the soil without the permission of the mining authority, within certain limits in the mining district, given in principle for one year only, but renewable indefinitely from year to year (Art. 16). The permission, however, does not of itself give an exclusive right to the person making the search; but a right to free diggings (Freischürf) can be acquired by following certain rules, by which means private circles of 400 metres in radius round the points indicated can be acquired. Such permissions (Schurfbewilligung) are given to all who apply

Searches for mines.

for them. Free shares (Freischürfe) are registered according to priority of declaration at the District Mining Office (Revierbergamt).

In order to keep legal possession of a Freischurf it is necessary to show that twenty-seven days' work (eight or ten hours) have been done upon it in the year (Art. 174).

As the object of the mining authorities is to encourage mining, they have the power of allowing the work done on one Freischurf to be considered as sufficient for several.

Where there are no rival competitors Freischürfe can practically be held on the payment of the four florins a year.

The payments become due at the end of each quarter.

As long as the dues are paid a polite excuse for not having done the required work, with a promise that work shall be done, satisfies the authorities, who are very lenient on this point.

The explorer cannot commence his work until after he has acquired from the surface proprietor, after the decision of the mining authority in case of opposition, the land necessary for the purpose, and given security for ultimately making good damage (Art. 27).

The right of searching in a free digging may be *alienated* on making a simple declaration to the mining authority. The searcher may not dispose of the produce of his digging without the consent of the mining authority; but he can, if he discovers a workable field, obtain one or more measures of mines or concessions.

The right to these is created by proving that the free share or free shares contain workable minerals; and here the "free digger" has the advantage over the searcher for mines in Prussia, as the "free-digging" gives him the opportunity of proving the workability of the field without opposition, and so gives him "the concession" if there is anything worth having. No mine can, in the first instance, consist of less than a simple measure (the "mine-measure" being a rectangle of 45,116 square metres in case of deep mines, and of more than double that area in the case of surface mines); but, if there is sufficient unoccupied land, any person may take in the first instance four ordinary measures (or 18 hectares), or, in the case of coal, four double measures (or 36 hectares), always in connection with the point of discovery in the centre. These can be united with other fields, so as to form a maximum of 36 hectares in the case of mines other than coal, and 72 hectares in the case of coal; but there is nothing to prevent one person or one company, conditionally on undertaking the necessary obligations of working, from acquiring as many

distinct fields of working as they please. The deep workings (Grubenmasse) give the right to all substances reserved from the ownership of the soil within the area taken. This principle is peculiar to the Austrian and the Spanish mining rights alone.

The surface workings (Tagmasse) are about double the size of the deep workings, and only give a right to the superficial mines (such as are reserved from the ownership of the soil alone). They cannot, however, exist with deep workings, and can only be granted in places where deep workings have not already been granted.

The mine-worker is required to maintain continuous working, though authority may be given for delay. There is no fixed rule as to the degree of activity which is requisite; it has to be settled in each case according to the circumstances by the Administration (Arts. 170, 174, and 243). The rules as to working before referred to, however, have to be observed; in default of which fines of from five to fifty florins, or, in case of repeated negligence, of double those amounts, may be inflicted. In case of persistent negligence the mine may be forfeited (Art. 240). Mines may also be surrendered, in which case they may be sold by the creditors (Arts. 263-5).

Sale of Concessions.—Concessions can be and are freely sold. The following are some examples: The mining rights at Silberleithen and Biberwier, in the Upper Inn Valley, were sold about the year 1879 to a German Syndicate for 30,000 florins (£2,500). The ore raised is chiefly zinc, with some lead ore.

The concession for the gold mine at *Hainzeburg*, in the Zillerthal (Tyrol), was sold in 1880 or 1881 to an American Syndicate. This mine is now abandoned.

N.B.—There is a specimen from this mine marked Zillerthal (Tyrol) in the Geological Museum at South Kensington.

A Hamburg firm bought the concession for working petroleum and asphalt at Seefeld in 1888, and paid 30,000 florins for it.

Many concessions in Styria for working all kinds of mines have changed hands by purchase. The same remark applies to the provinces of Carinthia, Carniola, &c., &c.

The concessions over an area of about 50,000 English acres at Erczepatak (Carpathian Mountains) were purchased by the Transylvanian Gold Mining Company, Limited, about 1888, for £60,000, of which £20,000 was to be paid in cash, and £40,000 in fully paid-up shares, the purchase-money including mining rights, goodwill, and plant.

The concessions over an area of above 10,000 English acres

at Eibenthal, in Hungary, were purchased by the Danube Collieries and Minerals Company, Limited, in 1889, for £100,000, of which £40,000 was payable in cash and the balance, at the option of the Directors, either in cash or shares. It is stated that they are subject to a Government tax of about £100 per annum.

The concession of silver lead mines at Rabenstein, Sarnthal, Tyrol, on which very little money had been expended, was purchased in 1876 for about £2,000.

It appears that before assignments are made notice must be given to the mining authority, and that, on the assignments taking place, a tax has to be paid to the State amounting to $3\frac{1}{2}$ per cent. of the value in the case of sales, and to 8 per cent. of the value in the case of assignments by way of gift, or in consequence of death (see Report of Dr. Moriz Weiss, presented to the Royal Commission on Mining Royalties).

The worker may execute, with the permission of the mining authority, any works outside his boundary, either for ventilation or for the more convenient extraction of his minerals (Arts. 85 and 86), and works common to several mines may be established by the permission of the mining authority (Arts. 87-89). Necessary works may also be established through adjoining mines, and use may even be made of the workings and roads belonging to adjoining mines on providing a sufficient indemnity. It is stipulated (Art. 195) that this indemnity should be in part a proportionate part of the cost of maintenance, and for the rest an interest which must not exceed 10 per cent. of the cost really saved by the mine making use of the works. In all cases the mine availing itself of the privilege is responsible for all damage caused to the other mine (Art. 196). All the indemnities in case of disagreement have to be fixed by the mining authority, with the right of appeal to the judicial tribunals.

Full provision is made for inspection and regulation of mines, and the mining authority has power to appoint a person to take charge of the working of a mine when the incompetency of the manager places the security or preservation of the workings in danger (Art. 224). The mining authority can stop the workings or even pronounce a forfeiture of the mines if the regulations are not complied with. The mining authority has also to see that the working is proceeded with without interruption and with sufficient activity.

Each mine has a code of regulations, "Dienst-Ordnung," which has to be approved of by the mining authorities (Revier-Bergamt, or district mining office) and by the political

authorities. The Dienst-Ordnung has the force of law. Each workman has, upon being engaged, his attention called to the Ordnung, and has to submit to the fines and penalties, and to the power of dismissal for bad conduct which the Ordnung sanctions. Cases of infringement of the Dienst-Ordnung are tried before the district law court. An appeal can be made by either party to the mining office.

The law makes provisions respecting contracts of service, and the terms on which masters and workmen can respectively give notice. On quitting a mine each workman has to receive a certificate, stating his class, the length of his service, and the relief society to which he belongs, and he cannot be received into another mine without such certificate (Art. 208).

**Relations
between
employer
and work-
men.**

Each mine must have its own society or be affiliated to a fund common to various workings, and established with the approval of the mining authority.

**Relief
Societies.**

The statutes and the contributions paid by men and owners, respectively, at present vary in different mines. The following appears to be the usual arrangement, viz.: The miners have to pay four per cent. of their wages towards the relief fund until a considerable fund is accumulated, when their contribution is reduced to two per cent. The masters have to contribute a sum equivalent to one-third of the miners' contribution for six years. The fund is administered by the mine-owner and a committee of the men, under the supervision of the Government.

It is, however, understood to be the intention of the Government that for the future all mines are to be placed under one and the same set of regulations.¹

The payments are to be everywhere the same, and they will be:—

From the men (1)—4 per cent. of their wages.

From the owners (2)—A sum equal to that paid by the men.

This change will be put in force as soon as possible.

One of the departments of the Ministry of Public Works is a mining department, with a staff of officials for the management of such department, and a permanent committee for mining matters. The empire is divided into different mining districts. At the head of a collection of such districts is a *mining official* (Berghauptmann) assisted by a number of counsellors (Bergräthe) and mining engineers. There are four such mining officials for the whole of the part of the

**Mining
authority.**

¹ It may be observed that Relief Societies for all kinds of workmen and women, even domestic servants, are being introduced, and *are obligatory*.

empire on the west side of the Leitha, having under them a varying number of district officers.

The four are :—

- 1 in Prague for Bohemia.
- 1 in Vienna for provinces of Upper and Lower Austria, Salzburg, Moravia, Silesia, and the Bukowina.
- 1 in Klagenfurt for Styria, Tyrol and Voralberg, Carinthia, Carniola, Görz and Trieste, Istria and Dalmatia.
- 1 in Cracow (Krakau) for Galicia.

In each separated district there is a mining office (Revierbergamt), which is presided over by a commissioner (Revierbeamte), who is subordinate to the Berghauptmann of his collection of districts. The Revierbeamte keeps a register of the searching permits and Freischürfe. In principle he is the ordinary authority before whom all matters come in the first instance. His duty is to see that the mining law is properly administered in his district, and that the mining revenue is collected by the revenue officers, &c. Grants of searching permits and Freischürfe are made by the district office, but the concessions are made through the Berghauptmann's office. Mining disputes which are of such a nature as not to come into the category of ordinary common law cases ("Civilstreitigkeiten") are tried by the district mining offices (Revierbergamt), the "Berghauptmannschaften," and in the last instance by the Department of the Ministry of Agriculture in Vienna, under which the Berghauptmannschaften stand. This last is the Court of Appeal and the Court of last instance in purely mining cases. Civil cases arising out of mining disputes are tried by the Landcourt of the province in which the mine lies, as the Court of first instance. The Court of second instance is the upper Landcourt of the province, and the Court of last instance is the "Oberste Gerichtshof" ("Highest Court") in Vienna.

If questions arise between adjoining concessionnaires they are dealt with by the mining authority of the district, but if between a worker of mines and a surface-owner they are referred to a commission consisting of the mining commissioner of the district, the Mayor or other municipal officer, and *local experts presided over by a "political" officer*. Appeals may be carried up from one mining authority to that immediately above, but not further, so that only decisions made in the first instance by the Berghauptmann can be appealed against to the Minister of Agriculture.

The mining authority may impose fines (varying from one to 200 florins) on the workers of mines for contravention of the mining law.

The Government may work mines (and do so extensively in Bohemia), but before doing so have to go through exactly the same formalities as private individuals, taking out Freischürfe, &c., and if a private individual gets precedence the Government cannot turn him out.

General
remarks.

British and Austrian mines cannot be properly compared, owing to the great difference of the circumstances under which they are found. Most British mines are found in places not much above sea-level. In Austria the metalliferous mines are usually found in mountainous districts, where they crop out, and where the land is of very little value for other than mining purposes.

The principal coal fields of Austria are in Bohemia, Silesia and Moravia, which are all rich agricultural countries. Of the Alpine provinces Styria and Carinthia have the most important fields.

The Southern Railway of Austria, a branch of which runs from Trieste to Vienna, and which passes through Styria, uses chiefly Moravian and Silesian coal, although it is compelled by law to use a certain amount of Styrian coal from Trifail.

For most of the smelting at the celebrated ironworks in Styria charcoal is used, as the coal to be obtained is not good.

In the Tyrol there is only one small coal mine, at Häring, in the lower valley of the Inn. This mine is worked by the Government.

In the Alpine Provinces, and especially in Tyrol, the mines are mostly at high altitudes,¹ where the land is of very little value.

As a general rule the same remark would appear to apply to metalliferous mines all over the world, viz., that they are situated in districts where the value of the land for agricultural purposes is not high.

In mountainous countries the mines are generally at high altitudes, or, if they are situated lower down, they are in barren rocky places.

Import
duties. Coal free; pig-iron 8*d.* per cwt. (Return of Foreign Import Duties, presented to Parliament September 1893).

BOSNIA AND HERZEGOVINA.

In Bosnia and Herzegovina, which, under the stipulations of the Treaty of Berlin, have been subject to the dominion of Austria-Hungary since the year 1878 (having previously been under the dominion of Turkey), there exists a somewhat special mining law,

¹ The Government mine of Schnee Berg is on a mountain 8,400 feet above the sea.

which is to some degree a kind of combination of the mining laws of Austria-Hungary and Turkey, tinged also with features from the Prussian mining law. This law was promulgated on the 14th of May, 1881, and principally differs from the Austrian law by the fact that, whilst under the last-mentioned law no searches may be made for minerals, even by the owner of the surface, without permission from the mining administration, under the Bosnian law searches may be made by the owner of the surface, or with his permission, without an official permit after a simple declaration to the mining administration. The dimensions of concessions under the Bosnian law also differ from those under the Austrian law, in being under the former not exceeding 200 hectares for combustible substances, and 50 hectares for other substances. There is also a distinction between the Austrian and Bosnian laws with respect to the degree of obligatory working which is requisite in order to retain possession of a mine, the determination of such degree being left under the former law to the mining administration in each case, whilst, under the Bosnian law, it is fixed in all cases at eight hours per week for each hectare of mine area. A very special feature of the Bosnian law is that it provides by the imposition of heavy penalties, including imprisonment, against combinations either of masters or workmen.

CHAPTER VIII.

ITALY.

NOTES AS TO MINING LAW.¹

THE unity of Italy as a kingdom has not as yet led to a general consolidation of the different laws with reference to mines which prevailed in the independent States of which the present kingdom is made up. These laws still subsist, and are of a varied character. Many forms of ownership exist with regard to mines in different parts of the country.

The "application of the laws" is clearly laid down by the Italian Government in the "*Rivista del Servizio Minerario nel 1883*," viz.:

"In Upper Italy, in the ex-Pontifical States, and in the old kingdom of Sardinia (Continent of Italy and Island of Sardinia), mines are given by the Government in concession, with preference to the discoverer.

"In Sicily and the Neapolitan Provinces the sulphur mines are reserved for the owner of the soil; all other mines can be conceded by the Government to whoever makes the demand, should the owner of the soil not work them.

"In Tuscany mines (except those of Elba and of Piombino, which belong to the Public Domain) are at the free disposal of the owners of the soil."

Thus the principle of "accession" and the "regalien" system both appear in the legislation, and it may be pointed out in addition that, as regards the iron mines in the Island of Elba and Piombino, and also until recently (and perhaps still to some extent) as to the mines in the ex-Pontifical States, the principle of "domaniality" has been recognised, the mines being considered to belong to the Crown, with power to deal with them at discretion.

These seem to be the general principles on which mines are dealt with in the kingdom, though it is understood that there are many old laws still on the Statute-book relating to mines which laws are now in disuse.

¹ The writer wishes to acknowledge the assistance which he received in the preparation some time since of this set of notes from Mr. Harper Powell, Superintendent of the Pestorena United Gold Mining Company, Limited, at Pallanza, in Italy; and, although it has been impossible to submit the notes to Mr. Powell for revision immediately before the date of publication, that gentleman reports that

Since the kingdom became united, various projects have from time to time been brought forward for establishing a uniform law based on one or other of the particular systems before referred to, but so far these projects have all fallen through, though there is now a prospect (which will be fully referred to later on) of uniformity being, to some extent, established in the law relating to mines, the existing laws as to the proprietorship of minerals not being disturbed.

There are, however, a few points on which remarks may be made which are fairly applicable to the whole country, for instance, as regards the regulation and inspection of mines.

A Royal Decree of the 23rd December 1865 subjected all working of mines, quarries, peat, and mineral manufactories in the provinces (to which the law of Piedmont of 1859 was not applicable) to police regulations, relative to the security of the surface and of the persons engaged about the works. By this law all workings are placed under official inspection, which is exercised by the Engineers of Mines, under the authority of the Minister of Agriculture, Industry, and Commerce, and of the Prefects and sub-Prefects, who have power to prescribe (after hearing the mine-owner) all measures proper to put an end to any cause of danger. The administration has also the right, in case of neglect, to execute the prescribed works at the cost of the mine-owner (Art. 5).

In case of accidents the mine-owner ought at once to inform the syndic of the district and the Engineer of Mines. In cases of urgency the syndic can take all necessary steps, with a right of requisition upon neighbouring mine-owners, at the expense of the mine-owner concerned (Art. 14).

All working of mines is prohibited within an area of 20 metres around court gardens and walled-in places, and within an area of 100 metres round buildings, canals, and private springs of water, failing the consent of the parties interested, or the works being admitted and declared to be without danger by the judicial authority. On the other hand, the judicial authority may, at the instance of private owners, prevent or regulate the working of mines outside the areas before referred to, if such workings endanger courts, gardens, buildings, canals, or springs (Art. 6).

Similar provisions are made for the protection of public property, such as roads, railroads, and canals (Art 7).

Mine-owners are required to keep plans of their underground workings, and to remit copies of such plans every year to the Government Engineers.

Mine-owners are also required to keep about their works

there has been no recent alteration of the law as to mining in Italy, except by the passing of a law as to surveillance of mines, which is referred to later on, though he gives a pitiful account of the state of the mining industry generally in Italy at the present time.

necessary appliances for aid in proportion to the number of workmen and the nature and situation of the works (Art. 12).

In the month of February 1890, a Bill was presented by the Government to the Chamber of Deputies for the compulsory insurance of workpeople, including miners, against accident, even in establishments worked by the State, the Provinces, or the Communes.

The Bill fixed the proportion of the premium to be paid by employers and employed. The risks might be underwritten either by the "Cassa Nazionale" or by private companies duly authorised. The Bill was, however, suspended by a Bill presented on April 13th, 1891, by the Minister of Agriculture, Industry, and Commerce, the principle of which was not only to provide against the consequences of accidents, but also to prevent their occurrence, by imposing penalties on employers who should neglect to take proper precautions for the safety of their workmen (*see* F. O. Rep. No. 211 of 1891, by Consul-Genl. Sir D. Colnaghi)¹.

In order to provide for the proper inspection of the mines and other technical duties, the Minister of Agriculture, Industry, and Commerce commands the services of the Engineers of the Royal Corps of Mines. The territory of the State is divided into ten mining districts, in each of which one or more Engineers are stationed, under the control of a Central Inspector resident in Rome.

The Royal Corps of Mining Engineers is now composed as follows, viz.: 2 Inspectors, 9 Chief Engineers, 21 Engineers of the 1st, 2nd, and 3rd class respectively, 6 Geological Engineers, 1 Student Engineer, 24 Assistant Engineers of the 1st, 2nd, and 3rd class respectively, 3 Draughtsmen (this work as a rule is done by Assistant Engineers), and 7 Writers. Total, 73 persons.

There are three Schools of Mines—Agordo, Caltanissetta, and Carrara, and a school for Capi Minatori (a cross between Mining Captains and Corporals) at Iglesias. ("Rivista del Servizio Minerario nel 1888," pages 89 to 91.)

In considering the subject of Mining in Italy the following facts should be constantly borne in mind, viz.:

1. That landed properties are cut up into very small parcels through the operation of the law of inheritance.
2. That mines are usually situated in high and poor land.
3. That the general taxation of the country is extremely heavy.

No Government statistics, published of late years, have given the number of the Royal Concessions in force; however, they must be at least 500 (this is exclusive of mines worked

¹ It is stated that the present Minister of Agriculture, Industry, and Commerce, Signor Boselli, is now busy preparing the necessary modifications to the project of law for the compulsory insurance of work-people against accidents.

in Sicily and Tuscany without Royal Concessions). Out of this number in the year 1888 about 200 are represented by the Government as having been worked.

In some districts the number of mines unworked is much greater in proportion than in others; the particulars (taken from reports of the Government Mining Engineers) given below will illustrate the extent to which the power of revocation is made use of.

During the year 1888 eight Concessions were granted and two revoked. The following table gives the number of Concessions and Permits of Research granted and revoked in 1888.

District	Concessions		Permits of Research	
	Granted	Revoked	Granted	Revoked
BOLOGNA	1	—	5	—
TURIN	—	—	7	39
IGLESIAS	4	2	27	13
VINCENZA	—	—	29	26
ROME	—	—	32	—
GENOA	—	—	1	—
MILAN	3	—	6	23
Total	8	2	107	101

The Rights of Research in force are as follows :

In 1887 the total number 467

In 1888 the total number granted 107

574

In 1888 the total number revoked 101

Total number remaining in force at end of

1888 473

Aperietur—Rights of Research—granted for Sicily, 4.

It is said that great laxity prevails with respect to the enforcement of the regulations as to the working of mines under concession, and that at least three-fifths of the mining concessions in force are not worked in conformity with the conditions

of the concessions, and that many are not worked at all. It is also stated that not one-fourth of the Permissions of Research are worked in conformity with the stipulations and conditions of the Mining Law; that these facts are of public notoriety, and are admitted by the Corps of Royal Mining Engineers.

From the preceding remarks it will be apparent that in order to understand the existing state of Mining Law in Italy, it is necessary to follow separately the history of the law as to mines in each of the States which go to make up the entire kingdom. The different States must again to some extent be subdivided according to their former history. It is proposed to give a short sketch here of the history of each State or portion of a State in which a separate law prevails as to mines, following the order in which the different laws are stated in the Blue-Book before referred to.

PIEDMONT.

In the 16th century the Duke of Savoy, Charles II., laid down a general law upon the subject of mines. In the second half of the 18th century various alterations of the law took place. During the French occupation the French laws of 1791 and 1810 were successively applied, but they were abolished on the return of the Kings of Sardinia to the possession of the country. In 1822 King Charles Felix issued Letters Patent to regulate the matter, based principally on the French law of 1791, and recognising a right of preference to the concessions in the owner of the surface. In 1840 Charles Albert established a complete Mining Code abolishing all previous laws on the subject, which code forms the basis of the existing law. This code transferred the right of preference to the concession from the owner of the soil to the discoverer. In other respects the law greatly resembled that of France.

The effect of the existing law of 1859 (in 171 Articles) is briefly but correctly stated on p. 20 of the Blue-Book before referred to.¹ By this law minerals are divided into two classes only, the property in which is owned as shown in the following table:—

¹ The reference to this Blue-Book will be found on page 5 of the preceding preface.

PIEDMONT—*continued*.

CLASSIFICATION OF MINERAL SUBSTANCES.

Mines	Ownership	To whom Royalty or Mining Tax is payable	Remarks
<p>I. <i>Mines</i>, comprising veins, layers, or beds of gold, silver, platinum, iron, copper, lead, zinc, tin, antimony, arsenic, bismuth, cobalt, nickel, mercury, manganese and other metals; sulphur, sulphates of iron, copper and zinc, manganese aluminium, alum, bitumen, asphalt, graphite, anthracite, coal, and lignite.</p> <p>II. <i>Quarries</i>, comprising peat and quarries of metalliferous sands and earths, stone for building and sculpture, chalk, slate, marble, sand, quartz, barytine, fluorine, and in general all rocks from which neither metallic nor combustible substances can be extracted, and not comprised in the 1st class.</p>	<p><i>In the concessionaire</i> from the State, the concession being given by preference to the discoverer, who may either be the owner of the soil or a stranger, who has made a search in accordance with the regulations, and established the existence of a workable mine.</p> <p><i>In the owner of the surface</i>, who is simply subject to police regulations for protecting the public safety. The workings must not be undertaken until after a declaration made to the sub-Prefect, accompanied (if the workings are to be underground) by a plan.</p>	<p><i>To the Government.</i> 1st a <i>Fixed Tax</i> of 50 centimes per hectare, and 2nd, <i>Proportional Royalty Tax</i> of 5 per cent. of the net profits ascertainable by the Prefect. <i>N.B.</i>—The latter rent has been, of late years, replaced by the general Income Tax (<i>Tassa di ricchezza mobile</i>)¹ amounting to 18·20 per cent. on the net profits of the undertaking. <i>If let</i>, to the owners of the surface.</p>	<p>Law of 1859, Arts. 59 to 63.</p>

¹ The *Ricchezza Mobile* (Italian Income Tax) is paid on the net working profit of a mine, not on the produce, as stated in the Blue-Book, p. 20. It is charged on all businesses alike, not specially on mining profits.

N.B.—By Article 14, mines of salt and saltpetre are excluded from the application of the law (being a Government monopoly).

PIEDMONT—*continued.*

No provision is made by the law for payment of rents to the owners of the surface, except in respect of land occupied.

For land temporarily occupied within or without the area of the concession, the owners of the surface are entitled to an annual indemnity of double the value of the net income which they could be shown to have produced ; but, should the occupation last for more than a year, or cannot be restored, the surface-owner can require it to be bought, without (it is said) any corresponding power on the part of the concessionnaire to require him to sell. In this case the value is taken at the ordinary rate, and not doubled as under the French law. The concessionnaire can be required to give security beforehand in case of works under buildings or enclosed places, or in their vicinity (Art. 81); but the concessionnaire may be excused from doing so if he proves that he has executed the necessary works to prevent any future danger (Art. 82).

In case of works outside the area of the concession the ordinary law of expropriation on the plea of public utility must be followed (Art. 83).

The principles of indemnity and recompense between neighbouring and underlying and overlying mines laid down by the French law of 1810 in respect of water (Art. 45) are adopted by the law of Piedmont (Art. 75), and extended to all cases of damage by one mine to another.

These cannot be undertaken even by the owner of the surface, except by permission of the administration granted by the Prefect of the province after a public inquiry (Arts. 20 and 23). The Prefect, subject to an appeal to the Minister, can either grant or refuse the permission (Art. 22), and his choice is not restricted in the case of concurrent applications, though it is usual to give priority to the applicant who has made the first regular application. A permit may be obtained even in cases where the proprietor of the land has refused his consent (Art. 20); but if the applicant has obtained the consent of such proprietor, he must unite it to his application (Art. 21), and it is said that, if he has not obtained the consent, he must at least prove that he has asked for it (Ag. § 1316). The permission of search fixes the boundaries within which it may be made, and the mineral for which it is granted; the duration is limited to two years, but it may be prolonged for a year (Art. 24), and prorogued at the pleasure of the Government even for years; and it may be revoked if the works are interrupted for three months, except in case of *force*

PIEDMONT—*continued.*

majeure (Art. 24). It may be disposed of on declaration being made to the sub-Prefect (Art. 28); but it does not give permission to dispose of the products of the search without a special authorisation of the Government (Art. 34). The permission does not give the right, without the formal permission of the proprietors interested, to make explorations in places enclosed by walls, or in courts or gardens, or to bore or open pits or galleries within a radius of 100 metres from dwellings, or the walled enclosures belonging to them, or within a radius of 40 metres from other walled enclosures (Art. 31). A special permission is required to follow the works to within a distance of less than 20 metres from roads, or less than 100 metres from canals, aqueducts, and watercourses (Art. 32). If the search results in proving, to the satisfaction of the Government, the existence of a workable mine, the discovery (Art. 35 says) shall be declared, after which the mine will be concessionable.

When the search is over, if successful, the administration proceeds, on the application of the party interested, to the “declaration of discovery,” which is made by the Con-
cessions. decision of the Minister of Public Works on the report of the Engineers of Mines (Art. 35). This declaration confers on the person in whose favour it is made a right of preference to a grant of the concession. Whilst waiting for the concession the holder of the right of research may be authorised to continue his works (Art. 36).

The finder and his assigns have the right of preference to obtain the concession of the mine declared discovered if within six months from the declaration of the discovery they put in a regular application and prove the necessary technical and financial ability of themselves or their partners to conduct the working and comply with the conditions of the concession (Art. 40). In default of such application and proof within the six months, the finder shall be, by the decision of the Minister of Public Works, declared to have lost his right of preference, and the concession can then be granted to another applicant, in which case the discoverer has a right to an indemnity to be paid by the grantee of the concession, the amount of which may be settled amicably between them, or otherwise is fixed by the act of concession.

No concession can exceed 400 hectares, about 988 English acres in extent, but the same concessionnaire can obtain several concessions even in the same neighbourhood. A concession only extends to the substance or substances of which the position has been declared discovered, and which are expressly mentioned in the act of concession. The mine when conceded forms a separate

PIEDMONT—*continued.*

immovable property which is distinct from the surface and perpetual, and capable of transfer like all other property, except that it must not be sold in lots or divided without an authority given by Royal decree. But as regards transfer, Art. 15 of the law provides that transfer *inter vivos* can only take place under the conditions indicated in the act of concession. These conditions usually are as follows, viz. :

To strictly observe the conditions of the mining law.

To pay a discoverer what he is entitled to.

To work the mine in a businesslike manner.

To pay the State tax of 50 cents per hectare.

Sales and leases of concessions. These appear to be of not unfrequent occurrence, but the terms of the arrangements, being purely a matter of private agreement, vary considerably. The following examples may be quoted :

The workers of lignite in Sardinia, in Umbria, &c., who have taken concessions from the original concessionnaires, pay the concessionnaires an average royalty of 1 lira per ton extracted from the mine.

In Lombardy and in Sardinia the workers of zinc mines who have taken concessions from the original concessionnaires pay an average royalty of 6 lire per ton of calcined calamine. Those who undertake the mining of lead, and lead and silver, or mixed undertakings, in Sardinia are liable to varying amounts of royalties of from less than 8 to more than 12 lire per ton, though it appears that the lead and silver mines of Italy are of poor quality.

It must be borne in mind that out of about 207 metalliferous properties really worked not 60 are worked to a profit. It is consequently not surprising to find that concessions are not freely sold or leased, and that a large proportion of the concessions which are worked, are worked by the concessionnaires themselves.

Surrender of concessions. Under Arts. 96 to 100 of the law the concessionaire or owner who desires to surrender the property of a mine must make a formal petition to the Prefects of the province (Art. 96); it must not contain any condition whatsoever (Art. 97).

After the petition has been presented no further excavations may be made in the mine. Ladders, bridges, &c., necessary for the working and maintenance of the mine must be left, but have to be paid for afterwards by a new concessionaire (Art. 98).

After the registration of the declaration of surrender, and after the visit of the Government Mining Engineer (Art. 100) to ascertain the state of the mine, &c., and after the necessary instructions given by the Prefect for the safety of the mine, the declaration of surrender is published on three successive Sundays at the sub-Prefecture and Commune where the property is situate.

PIEDMONT—*continued.*

Ordinary creditors of the party surrendering can put up the mine for sale, having obtained a decree of the local Tribunal of Commerce to that effect. Should there be a mortgage or mortgages on the mine, either the Government or the creditors, privileged or otherwise, can demand the sale. The order or decree would be made by the local civil tribunal, as in the case of ordinary creditors. The usual formalities prescribed by the civil codes are exactly the same as in the case of any other *real* estate mortgaged in favour of a creditor (Arts. 660, 662, and following of the Codes of Civil Procedure). Should no offer be made on attempted sale by public auction, the tribunal pronounces judgment, declaring the mine free and reverted to the State. To complete all formalities up to time of sale about four months are necessary.

When no creditors come forward at the time of the publication of the surrender, and no mortgages are found to be registered against the property, the surrender is accepted by Royal decree. This decree is published, and, after the expiration of forty days, the Government can dispose of the mine and grant a new concession of it. It will therefore be seen that about six months are required to liberate a mine from date of surrender when mortgages or creditors are in question; when there are no creditors or mortgages, two months suffice.

This is only provided for in one case—that is, where the concessionnaire of a mine which has been unworked for two years does not resume working after notice has been given to him by a ministerial decree (Art. 111). The right of forfeiture is, however, only a power which may be exercised by the administration, and is not obligatory. It is pronounced by the minister, on the recommendation of the Council of Mines. Appeal, however, can be made against the ministerial decree to the Council of State, and, if pronounced, gives rise to exactly the same results as a surrender, except that a sale has to be attempted whether there are mortgage creditors or not. As a matter of fact, the power does not appear to be often exercised. A case is given of the concession of a gold mine in the province of Novara which has not been worked for more than twenty years, but the concessionnaire has never been denounced by the Government Engineers.

As before observed, permission to execute works necessary for ventilation and drainage outside the areas of concessions may be obtained by concessionnaires by means of the law of expropriation for purposes of public utility. Owners of mines have a right of way for their minerals to the nearest communal or provincial road or waterway, subject to their making good any damage they may cause. It is said, however,

**Forfeiture
of conces-
sions.**

**Easements
of way,
water, &c.**

PIEDMONT—*continued*.

that communal roads, as a rule, pass close to most important mines; and that, when they do not, trunk roads are frequently made by mine owners to join the communal roads.

These are provided for by Arts. 84 and 85 of the law, under which, whenever the safety of persons or of the working of a mine is in danger, the Engineer of Mines, who must be informed, proposes the necessary measures to the Prefect; and the latter, after giving the concessionnaire an opportunity of being heard, prescribes the steps which he considers necessary to be taken, and which, except in cases of urgency, are not obligatory until the approval of the minister has been obtained; but may finally be executed by the administration at the cost of the concessionnaires.¹

Arts. 89 and 95 enact similar provisions to those of the French law as to procedure in case of accident to persons, and as to the supply of remedies and the employment of surgeons, with separate penalties in case of non-observance of the different obligations of the law.

LUCCA.

The law of Lucca of the 3rd May 1847 resembles the law of Piedmont of 1859, the most striking difference being that it recognises in the owner of the soil a right of preference to the permission of research and (subject to provisions for the benefit of the discoverer) to a grant of the concession (Ag. § 1341). The

Classification of minerals. law of Lucca does not specify the substances which are the subject of concession, but includes in such category all metallic and semi-metallic substances.

Royalties. The concessionnaire should pay to the State a royalty fixed by the administration, based on the value of the minerals extracted, which may, by agreement, be altered into a fixed annual payment (Art. 61).

For land taken within the limits of the concession, double yearly value must be paid, if the land be only occupied for a short time; after one year the landowner can compel the concessionnaire to buy at the real value; if the land is mortgaged, only one-fourth of the indemnity becomes payable to the owner, and three-fourths to his creditors.

Searches for mines. These can only take place by permission of the owners of the surface, or of the Government, given on condition of an indemnity being paid to such surface-owners for damage that may be done, to be fixed by agreement or by experts, and for which the owners can require security to be given. Permissions only last for a year, but may be prolonged if there is a likelihood of discovery, and may be revoked if the work is

¹ A recent law, dated the 30th March, 1893, and entitled "Polizia delle Miniere, Cave e Torbiere," provides for a better surveillance of mines, quarries, &c., and is understood to have been passed especially with the view of ensuring a strict supervision of the Sicilian sulphur mines.

LUCCA—*continued.*

delayed for a month. Any discovery must be notified to the Government, when, if it is ascertained that a workable mine really exists, a concession may be granted; and, pending such grant, special permission may be given.

Concessions can only be granted after the mine has been discovered and the practicability of working it has been admitted by the Government. The application must be published **Concessions.** for forty days, during which time any one may protest against the concession being granted.

A right of preference to a grant of the concession is given during a period of three months from the date of the discovery to the person who has made the discovery under the previous conditions, on his proving that he is possessed of sufficient means to work it. In the event of his not obtaining the concession, he is to be awarded an indemnity (at a rate fixed by the Government) in the act of concession, and in addition is to be reimbursed the cost of the works executed and the value of the minerals extracted by him (Art. 35). After the discoverer, the law recognises a right in the surface-owner, on proving his ability to work the mine, to the concession, and it is only in the event of neither of those parties demanding a concession that the Government can choose at discretion between other parties who may have applied for it simultaneously, and can prove their ability to work the mine.

In any case the Government fixes the limits of the concession at discretion, but usually adopts the limits asked for in the application. The concessions are perpetual, and may be disposed of subject to any condition which may be inserted in the act of concession (Art. 31). The concession may be forfeited not only (as in Piedmont) in case of failure to work for two years, but also in case the mine is in such a disorganised condition as to induce belief on the part of the administration that it cannot be reorganised (Art. 63).

With a few trifling exceptions the rest of the law is similar to that of Piedmont. The law does not, however, **Generally.** contain any provisions relative to the relations between neighbouring or overlying or underlying mines.

The subject is not of much practical importance, as there are only worked under this law two concessions, one of silver lead and one of lignite. (Government Mining Report for 1887.)

MODENA AND REGGIO (EMILIA).

The law of the 9th August 1808 emanated from Napoleon I., and naturally forms a sort of cross between the French laws

MODENA, &c.—*continued.*

of 1791 and 1810. It will only be necessary to draw attention here to the points in which it differs from the law of 1810. The law is only of theoretic interest, as it is understood that no concessions are worked under it.

Mineral substances are divided into *two* classes only, that of "mines," which cannot be worked except by virtue of a concession, and that of "quarries," which are left to the free disposition of the owner of the soil, under reserve of the right of extraction by reason of public requirements.

Royalties or taxes. No royalties are payable by law to the owner of the soil in respect of the minerals comprised in the first class.

Explorers and concessionnaires have the right to occupy the lands which are necessary for their working on paying the owners beforehand the value of the presumed probable damage, or of the land occupied, with the addition of a sixth part of the same value (Art. 31). The concessionnaires are also responsible for all the damage which the working of the mine may occasion.

Anyone may make these for a period of six months, which period may be prolonged by the administration (Art. 9). If the owner of the soil opposes the carrying-on of the searches he may be restrained by the Government, and the explorer has the same rights and obligations towards him as a concessionnaire would have.

These can only be granted for fifty years at the most (Art. 11), and can extend over an area of six Italian square miles (Art. 12). They are only available for the substance named in the act of concession (Art. 36).

The Government, after due publication, has power to decide at discretion if there is ground for a concession. If there is, the concession may be granted within boundaries fixed at the discretion of the Government according to the following rules. If the mine is notoriously known as discovered, and is unworked, the owner of the soil has the right of preference if he proves that he has the necessary means, and he asserts his rights within three months from the date of the first application. In default, the mine is granted to the first petitioner who has made his application in form. If the mine has not been previously known, the first finder or applicant has the preference if he proves the necessary means, the finder being considered the first person who has pointed out the mine, at least so that the contrary cannot be proved by any third person. If the finder is excluded by reason of not proving himself possessed of the necessary means, he has a right to an indemnity from the concessionnaire, to be fixed

MODENA, &c.—*continued.*

by agreement, or in default by the administration. Whenever a new concession becomes necessary by the discovery of a new substance within the field of a mine, the first concessionnaire has the right of preference (Art. 36). At the expiration of a concession the concessionnaire has the right of preference to a renewal of it if he has performed his obligations (Art. 38).

Special conditions may be inserted in the act of concession (Arts. 26 and 28).

Dealing with concessions. Concessions may be disposed of at pleasure, but the transferees should make a declaration within three months to the administration proving their means to work, and the transfer is not effective until it has received the approval of the administration (Arts. 43 to 45).

Forfeiture of concessions. This may be incurred (1) Through the working not having commenced within four months from the date of the concession (Art. 48). (2) Through the work being stopped for more than six months without good reason. (3) Through the different conditions of the act of concession not having been complied with. (4) Through the working of the mine not having been continued as actively as the administration thinks proper. (5) Through default in making the declaration within three months of a transfer by gift or sale. The forfeiture is in all these cases pronounced by the Minister of the Interior on the report of the Prefect after hearing the concessionnaire (Art. 51).

Surrender of concessions. The concessionnaire may surrender his concession on giving three months' previous notice to the administration.

Both in the case of forfeited and surrendered mines, or when the concession has lapsed, the concessionnaire is forbidden to work the mine; he has only the right to sell the mineral already extracted, the unfixed machinery at surface, and tools, but cannot take away ladders, pit-work, woodwork of galleries, or anything else necessary for keeping open the access to, or for continuing the internal working of, the mine (Art. 53). Whenever a fresh concession is granted, the new concessionnaire shall pay to the former one, or his heirs, the value of the effects left on the mine, which are recognised as useful for the keeping-up of the same, at a just estimate to be determined by agreement, or by experts named by the parties, or by the tribunal (Art. 54).

Regulation of mines. At the end of each year mine-owners must give particulars of the work executed, with plans for working in the succeeding year, indicating the number of workmen occupied and the gross and net produce of the undertaking (Art. 39).

NEAPOLITAN STATES.

The general law is contained in an Act of the 17th October, 1826. By this law the mineral substances are divided into two classes, subject to the incidents respectively shown in the following table, viz. :

CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals	Ownership	To whom Royalties or Mining Taxes payable	Remarks
I. Metallic and semi-metallic mines, coal, bitumen, alum, and sulphates with metallic base.	Apparently <i>in the surface - owners</i> , who may work themselves or grant the right of working to third parties, and without any concession from the Government; but the Government may grant the right of working mines to third parties if, after a warning and sufficient delay, the owners of the surface do not work them.	To the <i>surface-owners</i> when concessions are granted, the amount being fixed by agreement, or in default by the courts.	Arts. 2 and 15.
II. Mines of Sulphur and plaster and quarries of stone, marble, granite, sand, slate, &c., and all other substances not comprised in the first class.	<i>In the owners of the surface</i> , to whose free disposition they are left without any restriction.	If let, to the owners of the surface. As regards mines of sulphur in the Island of Sicily a tax called <i>Aperietur</i> is payable on the mine being first opened. The amount so payable in respect of each mine opened is 127 lire 50 c. (or about £5).	(Art. 17). This tax was originally levied under a Royal decree of the 8th October 1808, which was continued in force by a Ministerial Circular of the 21st February 1868.
<i>Salt mines form a separate class.</i>	On the mainland <i>in the Crown</i> and on the Island of Sicily in the <i>surface-owners</i> .	To the Crown or the surface-owner, as the case may be.	(Art. 16).

NEAPOLITAN STATES—*continued*.

A peculiarity of this law appears to be that the worker of a mine which has been opened on one property may follow it into an adjoining property without the owner of the latter being able to prevent him; but in this case the latter has a right to be compensated, such compensation to be mutually agreed on or fixed by the arbitration of a judge (Art. 15). This right, apparently, is only applicable to mines which are worked under private grants; as, in the case of concessions, the boundaries of each concession have to be stated. The right seems to be analogous to that which is recognised by the law of the United States of America.

These are payable in the manner shown in the above table, and are subject to all the usual taxes. It is stated that the workers of sulphur mines, when not themselves the owners of the surface, usually pay to the latter by force of agreements between the parties, not regulated by special laws, and under the title of rent or royalty, a fraction of the entire gross yield of the sulphur; this fraction is sometimes paid in kind, that is to say, in the condition of pure sulphur. It is also stated that in the Island of Sicily the royalty varies generally from 20 to 25 % of the produce, but sometimes is less, and at other times the higher limit is exceeded, and examples are given of such royalties reaching even up to 40 %. Nor are there wanting in Sicily cases of royalties on an ascending scale—that is, progressive with the duration of the leases; as also of royalties fixed according to the varying price of the sulphur. We are also told of nine years' contracts, for which the lessee has to pay the rent or duty of 11 % for the first three years, of 13 % in the following three, and of 15 % in the last three. In other contracts we find the fixed rent or duty of 10 % for the years in which the average price of the sulphur stands at between 8·50 and 9·50 lire per cwt., that of 11 % for averages of 9·50 to 10·50 lire, and that of 12 % for prices above 10·50 lire.

It is, moreover, stated that contracts exist fixing a minimum duty, which the lessee is bound to pay, whatever be the produce of the mine. Other contracts instead take as their base a fixed figure of production and reckon the duty upon this. For example, one contract fixed the rent or royalty at 8,000 cwt. of sulphur, while the produce was less than 32,000 cwt.; when this output was exceeded, there remained simply a royalty of 25 %. By virtue of another contract the owner receives the duty of 40 % on a specified output of 222,000 cwt., he gets therefore 88,800 cwt. of sulphur, whatever the actual yield of sulphur may be.

Besides the burden of the duty, certain contracts involve also the obligation of sinking a sum of capital money, which has in certain cases exceeded even 100,000 lire.

NEAPOLITAN STATES—*continued.*

In the Neapolitan or mainland provinces of the ex-kingdom, the duty is on an average somewhat less heavy than in Sicily, varying actually from 10 to 20 % of the gross produce. In these provinces, and in the island, there are a few examples of sulphur mines for which an annual sum of money is paid to the owner under the name of "fittanza" (rent).

It seems doubtful if, with the recent low prices of sulphur, the royalties mentioned above could be maintained.

The length of leases in Sicily varies considerably, that is, from nine or ten to thirty, up to fifty years: at present the idea of long leases prevails. On the mainland, the term most generally in vogue is that of ten years; still, there exist some contracts which extend it to even twenty years.

Where concessions of mines are granted, the concessionnaire is bound to make good damage caused to the surface; in default of agreement the matter is settled by the ordinary tribunals.

In default of the owner of the surface working the mines, there appears to be power for the Government to grant concessions of mines to persons who prove their ability to undertake and pursue the working, and to pay all indemnities to which they may become liable (Art. 2). The discoverer has a right of preference, or, if the concession is granted to another, to an indemnity to be fixed by the Government.

The concessions are to be granted for metalliferous mines, according to the law of 1859; but the proprietor of the soil has a right to receive compensation from the concessionnaire (Art. 15).

It appears, however, that, as a matter of fact, only one concession for a metalliferous mine has been granted under the law of 1826, viz., of a mine in the province of Reggio Calabria—which is *unworked*.

According to the law, forfeiture is to be decreed if the works are not commenced within two years from the date of the concession (Art. 13).

In addition to the rules established by the general decree of the 23rd December 1865 (applicable to all mines throughout the country not subject to the Piedmontese law of 1859), a special law, of the 31st January 1851, lays down certain rules as to the manufacture or treatment of sulphur. Establishments for these purposes can only be started after a declaration to the administration, and are prohibited, except by special permission, within a certain distance from inhabited places and cultivated lands.

Surface occupied or damaged.

Forfeiture of concessions.

Regulation and inspection of mines.

NEAPOLITAN STATES—*continued.*

The mining industry of the Neapolitan States and Sicily does not appear to be very important or flourishing. The mines worked in the former States in the year 1888 were as follows :—

MINES WORKED IN THE NEAPOLITAN STATES (EXCLUSIVE OF SICILY) IN 1888.

Province	Mines ¹	Minerals	Produce
CHIETI . . .	3	Asphalt, bitumen, and stone	£10,760
CATANZARO . . .	7	Sulphur . . .	47,526
AVELLINO . . .	2	Sulphur . . .	30,690
CASERTA . . .	1	Petroleum (well) .	240
Do.	1	Asphalt . . .	840
COSENZA . . .	1	Rocksalt . . .	8,240
Total . . .	15		£98,296

The Government Engineer's report for 1888 as to excavations for minerals in the province of Messina, in the Island of Sicily, is as follows, viz. :—

"Several of the small but numerous excavations in the province of Messina have continued to be worked, but in a very irregular manner, the work being limited even to a few days during the year.

"This year better and more detailed statistics have been obtained, which enable one to ascertain that this industry, although developed under most difficult conditions, and in the hands of persons almost devoid of means and of all technical knowledge, is not without a certain importance. The principal minerals that form the scope of the mining industry are: antimony, grey copper, and copper pyrites, silver-lead, ore and blende. The mining works consist, except in very rare cases, of quite superficial excavations. Frequently advantage is taken of the denudation of some metalliferous veins, produced by land-slips, which are of frequent occurrence in these soils, composed of argillous mica-schist; and these veins contain the small metalliferous deposits. These small veins, you will observe, are not described as regular well-defined lodes or veins, but are spoken of as containing deposits."¹ ("Rivista del Servizio Minerario nel 1888," p. 51.)

¹ It will be seen that the above extract from the Government Engineer's Report does not extend to mines of *sulphur*, which is the chief mineral product of the Island of Sicily, and as to which the following particulars are taken from the Government Reports for 1888 :—

DISTRICT CALTANISSETTA (*Whole of Island of Sicily*).—The quantity of sulphur produced during 1888 was 322,042 tons, of a value of lire 21,512,405 (£851,532);

NEAPOLITAN STATES—*continued.*

In spite, however, of apparently unsuccessful results of mining in the Neapolitan States and Sicily, it appears that mines are sometimes disposed of in those countries for considerable sums.

The produce of the sulphur mines of Sicily is subjected to a special export duty of 10 frs. per ton.

LOMBARDO VENETIA.

These States were formerly governed by the Austrian Mining Law of the 23rd May 1854, the provisions of which are fully set out under the head of "Austria-Hungary." In 1859 Lombardy was annexed to the kingdom of Sardinia, and the mines of the country were shortly afterwards placed under the Piedmontese law of the same year. Venetia still continues under the Austrian Mining Law of 1854.

The mining industry is inconsiderable, as will be seen from the Government return for the Venetian Provinces in 1888 :

Province	Mines	Minerals	Tons	Value	Workpeople
BELLUNO : .	1	Copper	12,060	lire 120,160	202
VICENZA . : .	5	Lignite and bituminous schist.	17,559	187,837	226
			—	—	—
Totals .	6		29,619	307,497	428

The content of metallic copper in the ore is said to be low and the quality of the lignite to be poor.

A fixed annual tax of lire 9·88=7*s.* 10*d.* is payable for each "misura" (=12,544 square perches), in respect of which a permission to explore or a concession is granted.

PARMA.

The mining industry subject to the provisions of this law is unimportant.

Properly speaking, there are no metalliferous mines.

during 1887, 300,802 tons, of the value of lire 20,905,739 (£827,518). The increased production during 1888 was therefore 21,240 tons, of a value of lire 606,666 (£24,014). This production was obtained by 25,024 workpeople. The average free-on-board price at shipping port was 53*s.* 5*d.* per ton during 1888, whereas it was 55*s.* 7*d.* in 1887.

PARMA—*continued.*

The following were the Concessions and Permits to explore recently in force:

(Rivista del Servizio Minerario 1887.)

Province	Mines	Mineral Concessions	Value	Workpeople
PARMA . . .	8	Petroleum wells producing 149 tons crude oil	lire 46,000	68
	1	Mineral spring	33,740	3
PIACENZA . . .	2	<i>Explorations.</i> Petroleum wells producing 10 tons crude oil	6,000	15
	1	Copper, no ore yet discovered	—	9

The law is laid down by an Act of 21st June 1852, supplemented by a Ministerial decree of the 8th July 1852. This law possesses several special features, which will appear from the following notes. In the first place it divides mineral substances in the manner set forth in the following table, viz.:

CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals	Ownership	To whom Taxes or Royalties payable	Remarks
I. <i>Mines</i> , all metalliferous and coal, lignite, different bituminous matters, sulphur crystals, marble, monumental stone, and in general all mineral substances which are not in common and constant use, and mineral ¹ springs.	<i>In the State</i> , to concede them to third parties.	<i>To the State</i> , viz., 5% of the net produce, which may be converted by the administration into a fixed annual sum. If the mine is not worked the tax must still be paid, being calculated according to the last previous results.	It is believed that the tax is merged in the <i>Ricchezza Mobile</i> .

¹ This is said to be the only law which classes *mineral springs* amongst mines.

PARMA—*continued.*CLASSIFICATION OF MINERAL SUBSTANCES—*continued.*

Minerals	Ownership	To whom Taxes or Royalties payable	Remarks
II. Quarries. Marl, limestone, brick-earth and sand.	<i>In the Owner of the surface, still the State may grant a concession of these substances to any one who has discovered an entirely new and special mode of applying them (Art. 22 of Law).</i>	<i>If let, to the owner of the surface; if conceded, apparently to the State as above.</i>	N.B.—In case of doubt as to the legal classification of any substance, it is to be determined by a decision of the administration (Art. 14 of the Decree).

Surface land occupied or damaged. The surface-owner has the right to be indemnified by the concessionnaire against loss of revenue or damage caused by the workings either through occupation of land or execution of the works.

Royalties. The royalty payable to the State is mentioned in the preceding tables. No royalty or rents are payable by law to the owners of the surface.

Searches for mines. These cannot be made without the consent of the owner of the surface, which, however, he cannot refuse in the case of an authority given by the administration. He is entitled only to be recouped the loss of revenue which he may sustain through the occupation, and the repair of the damage resulting from the execution of the works.

Every discovery of a mine must be made known to the authorities by the discoverer within a fortnight, under the penalty of his losing all the rights to which his discovery might otherwise entitle him.

Concessions. On receiving information of the discovery the administration determines whether to work the mine or to concede it; if the latter, the discoverer has the first right to a concession on proving that he has the necessary technical and financial ability; after him, the owner of the soil, subject to the same condition; and, after those two, the Government can give the concession to any one at discretion. If the discoverer should not obtain the concession, he is entitled to an indemnity, to be fixed by the Act of Concession, for the outlay he has made. A concession only confers the right of working the substance specified in it within the area indicated by it; but

PARMA—*continued.*

the concessionnaire of one substance has the right of preference to a concession of any other substance within the same area. The concession is only granted for the period fixed by the Government, which is determined by local circumstances, the nature of the substances to be extracted, the difficulties of extraction, and the capital considered necessary for the undertaking. But the concessions may be renewed with the right of preference by the concessionnaire or his successors. The concessionnaire has also to give security.

Concessions must not be divided, but they may be transferred by gift or sale subject to the approbation of the Government, the transferees being required to prove within three months that they have the means necessary for continuing the working.

This may take place if a mine remains unworked or is insufficiently worked, and in case the concessionnaire, after being warned, does not within one month comply with the requirements of the administration.

It is observed that this law is distinguished from all others, not only by the special classification which it makes of mineral substances, but by the character which it gives to the concession, which, having regard to the several incidents of the limited period of the concession, of the security required from the concessionnaire, of the absence of right to transfer without authority and of complete forfeiture in case of failure to work, assumes rather the character of a concession of public works than of a separate immovable property.

**Dealings
with con-
cessions.**

**Forfeiture
of con-
cessions.**

**General
remarks.**

D'ESTE.

The system of Este, without limitations, formerly applied to certain districts of the province of Massa Carrara, and gave the Sovereign absolute rights of domain over the working of mines and the establishment of manufactories, which he might deal with at pleasure; but by a Ministerial order of the 24th July 1860, the Piedmontese law of 1859 is extended to the districts in which the system of Este, without limitations, formerly prevailed. The system of Este, with limitation, applied to different portions of the province of Massa Carrara, has special reference to searches for and the working of marble on the communal lands. The law recognises priority of occupation and discovery, secures royalty to the commune, and provides for forfeiture in case of failure to work.

It is stated that there are no metalliferous mines, and *only*

D'ESTE—*continued*.

one lignite mine worked in the province. This lignite mine is unimportant, producing only 5,012 tons, of a value of lire 42,103, and employing 70 workpeople. The total tax payable to the Crown at 50 ctmi. per hectare of ground (in 1888) amounted to 227 lire, about £9. 1s. 7d. There are many valuable quarries worked under the system of Este, with special limitations, viz., in the district of Carrara under the law of February 1751, and in the Massa district by the regulations of July 1846.

**General
remarks.**

EX-PONTIFICAL STATES.

The principle of absolute ownership by the Crown of all mineral substances capable of being worked seems to have been recognised from an early period, the Sovereign Pontiffs being in the habit of granting permissions to work such mines, without any special formality, to whom they pleased, and for whatever periods and upon whatever conditions they thought proper. The existing legislation applicable to the States seems to differ in different portions of such States, according to the date of their annexation.

In the States known as "The Marches," which were annexed in 1860, the Piedmontese law of 1859 has been made applicable.

In the provinces of Forli, Rome, and Perugia the system of searches for and concessions of mines has been regulated to some extent by Royal decrees of 23rd March 1865, and 17th June 1872, which have extended to those provinces similar principles to those of the Piedmontese law of 1859.

It would seem, however, that the provinces of Bologna, Ferrara, and Ravenna still remain subject to the general principles of ownership by the Crown which formerly prevailed, apparently because no occasion has arisen to apply them (Ag. § 1346).

It is understood that the decree (Regolamento) of the 23rd December 1865 as to regulation of mines now applies to all the provinces.

It will be seen from the following table that there is only *one* metalliferous mine worked in the ex-Papal States, *aluminium*, the others being mines of asphalt and lignite, the latter belonging to the Torni Company, the production being used in the works of that Company :

EX-PONTIFICAL STATES—*continued*.

Province	Mines	Minerals	Tons	Value	Workpeople
CHIETI . . .	3	Asphalt, &c.	6,077	lire 269,305	574
ROME . . .	3	Do.	173	11,326	27
Do. . . .	1	Aluminium.	6,050	30,250	93
PERUGIA . . .	5	Lignite.	94,713	912,444	1,027
Totals . .	12			1,233,325	1,721

TUSCANY.

In this part of the country, under a Grand Ducal “*motu proprio*” of 1788, except in the Island of Elba and Piombino (where the minerals are reserved to the Crown as part of the public domain), the ownership of the soil carries with it that of the mines (*see* Report of Consul-General Colnaghi, 1882).

The mines are occasionally dealt with by sale or lease, much as in England. At the present time in Tuscany the workers of many of the most important mines are also owners thereof, having bought the mines, or in some other way acquired the perpetual right to work. Where, however, the worker is not himself the owner, the latter, in proportion with the right granted, receives payments which vary considerably according to time, place, person, and other circumstances, there being no special rule regulating such matters. Some agreements accordingly provide for a joint interest in profits, others reserve to the owners of the surface a certain percentage of the gross produce, or a royalty in money for every ton of mineral extracted, or a fixed dead rent; then there are agreements of a mixed character, and there are also sliding scales; thus, for example, it is stated that some workers of mercury mines contribute to the owners of the surface from 14 to 20 % of the profits; others, a fixed dead rent of from 2,000 to 6,000 lire, and sometimes, in addition to the dead rent 5 % of the gross produce. Certain owners of cinnabar-producing lands receive the annual rent of from 50 to 70 lire per hectare.

There are copper mines which contribute 8 % of the mineral extracted, others pay 5 lire per ton. The royalty paid by some workers of antimony varies from 10 to 14 lire per ton, that paid by workers of manganese mines from 5 to 8 lire.

Lignite bears a royalty of one lira per ton, or of a fixed annual sum, which sometimes amounts to 20,000 lire; some mines pay 5 % of the gross produce.

TUSCANY—*continued.*

These mines belong to the Public Domain. They have been relet quite recently to a Sig. Tonnetta, but the conditions of the iron mines contract have not yet been made known. The policy of Elba. of the Government with respect to their iron mines has been to put such a heavy royalty on ore exported (viz. lire 4.25 = 3s. 5d. per ton for unwashed mineral, and lire 5.25 = 4s. 2d. per ton for washed mineral exported) as practically to prohibit its shipment. The object of this prohibitive policy has been to induce capitalists to erect furnaces in the kingdom, but it has been thwarted, owing to the high prices ruling abroad for *hæmatite*.

The royalty for ore used in Italy is only 50 ctmi. per ton = 4 $\frac{3}{4}$ d., and, notwithstanding this, the home demand for the ore in 1888 was only 9,104 tons (*see* table below).

It is understood that the last contractors of the mines were able to get out without much loss, but declined to contract again even on far more favourable terms.

It appears that the bulk of the iron ore of Elba is shipped to America, as indeed is proved by the following table :

TABLE OF PRODUCTION AND EXPORTATION OF IRON ORES
EXTRACTED FROM THE ROYAL MINES OF ELBA.

	Tons		Tons
Production in 1888 .	154,880	Shipped to America .	115,557
Remaining in stock from 1887	40,995	„ „ England .	61,240
		„ „ France .	9,924
		Used in Italy . .	9,104
	195,825		195,825

ITALY GENERALLY.

As before stated, numerous attempts have been made since the unification of Italy as a kingdom to bring about uniformity in the laws relating to minerals throughout the country, and a long series of measures have been brought before the Italian Parliament with that view, based upon one or another of the systems now followed in different parts of the country, apparently according to the domicile or proclivities of the promoters of such measures, but up to the present time without any success. Not long since there appeared, indeed, to be some reasonable prospect of the laws being effectually consolidated to some extent under the following circumstances, viz.:

During the Session of 1889-90 a Commission¹ of Deputies sat to consider a draft Bill presented in November 1889 by the

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¹ What is here referred to as a Commission, should perhaps be more strictly referred to as a Committee.

Minister of Agriculture, Industry, and Commerce "on expropriations, partnerships, police of workings in mines, quarries, and peat, and on searches for minerals."

This Commission, in March, 1890, issued a long and interesting report, of which it may be worth while to give here a short analysis.

The report commences by referring to the draft Bill, and states that there actually exist sixteen different schemes of law (*progetti*), of which it gives a list (the dates extending from 1862 to 1889), none of them, however, having been approved by the two Houses of Parliament.

The report then treats of the different subjects as to which it is proposed to legislate, dividing them under the following sections and headings:

SECTION I.—EXPROPRIATIONS AND PARTNERSHIPS.

The provisions referred to under the first part of this heading seem to be adapted to some extent from Art. 83 of the Piedmontese law of 1859, which enables concessionnaires to execute, outside the areas of their concessions, the works necessary for the ventilation and drainage of their mines by resorting to the system of expropriation on the ground of public utility.

The second part of the same heading deals with the system of compulsory partnerships, which it is proposed to establish in order to deal with the difficulty of mining on any extended scale, in consequence of properties in Italy being split up into small proprietorships. The notion appears to be that where there are different workings in what should naturally constitute one mine, and which would be more easily and regularly worked if it belonged to one owner, the various owners should to some extent become partners, in order to carry out works for the common good, with the risk of expropriation (on the usual terms) of any one who wishes to withdraw himself from the partnership. The principle of such compulsory partnerships already exists in the Piedmontese law of 1859, which (Arts. 73, 74, 76 and 77) gives the administration power to require different neighbouring concessionnaires to form a syndicate in order to carry out a common plan of working, and to undertake and carry out works for the common good of all when necessity arises either from motives of public safety or to secure the preservation of the mines concerned. The principle indeed seems to have been originally adopted in the French law of the 27th April 1838, and to have been extended by the Piedmontese law to all cases which might arise in working mines, and not to have been limited (as by the French law) to the case of apprehended *flooding* only. The report fully acknow-

ledges the difficulties presented by the constitution of compulsory partnerships, and considers the subject minutely with the view of ascertaining in what cases it would be reasonable to constitute such partnerships. The outcome of the consideration is a recommendation that the power of enforcing contribution towards works for the common benefit should be limited to such works as merely require an original capital outlay and a subsequent small expenditure to prevent decay, such as drainage adits or headings and ventilation shafts, but should *not* extend to works which would require a considerable annual expenditure, especially with the application of mechanical apparatus, such as pumping works or mechanical ventilation. Beyond this it is not proposed to go, though it is pointed out that the true method of making the industry fruitful and profitable would be to connect together the different portions so as to make them into one single mine ; but it is remarked that such union should be the result of voluntary and friendly agreements between those interested, and certainly not of compulsion. The Commissioners also report that they consider that the importance and nature of the provision demands that the partnership shall be constituted not by Ministerial decree but by Royal decree, after an administrative inquiry, and the hearing of both the parties interested as well as the Council of Mines. They also refer to the provisions which already exist in the Civil Code and in the laws as to public works for constituting partnerships in reference to irrigation works, roads, and replanting ; and, after remarking that this is the first time that compulsory partnership has been proposed for works of private interest, as showing the importance of the proposal, they go on to consider what provisions should be made against private rights being too severely injured. They point out the difficulty in which small proprietors might find themselves if they required to raise capital on so uncertain a property as that of a mine, and, on the other hand, the risk that the majority would incur if they had to expropriate the portions of the mine belonging to the minority on the strength of mere *valuations* of such an uncertain property. The Commissioners propose to meet the difficulty by giving members of the minority power to pay their contribution by way of annuities extending over twenty years and secured on their shares of the mines. If they prefer, they are to be entitled to give up their shares of the mine to the others, receiving an indemnity on the usual principles of the law of expropriation for the sake of public utility. Where the ownership of the mines arises from a concession distinct from the ownership of the soil, the whole concession must be expropriated ; but where

by law the ownership of the mine is combined with that of the soil, the expropriation must extend to both the surface and the subsoil, but only to that portion of land containing the mineral which can share in the profits of the partnership.

SECTION II.—POLICE OF WORKINGS.

The provisions recommended under this section are, for the most part, textual reproductions of the regulations promulgated on the 23rd December 1865, giving such regulations the force of law, extending them to the whole country, and establishing effective penalties to secure observance of the law. The Commissioners remark that the general principle to be followed in regulating the police of mines is that the mining corps and the administration ought always to have for their object the prevention of danger, but should never impose on the worker a given system of working, the art of mining having no fixed rules, and the manager being entitled to his own uncontrolled discretion as to the system of extraction which he should follow; and that the mining corps, exercising a diligent watch, ought to do its best to prevent the workers from omitting, through ignorance or avarice, any necessary precaution, though it should not determine what system is to be adopted.

SECTION III.—GENERAL PROVISIONS.

The Ministry, by their Bill, proposed to consolidate the laws of the country as to the ownership of mines by adopting the system of concession throughout the country, giving to the owner of the soil the right of preference to the concession. The majority of the Commission, however, decided against this proposal, and the Commissioners subsequently decided unanimously to strike out all provisions of the Bill affecting the existing rights of ownership. The report contains a full statement of the reasons which had led the Commissioners to this conclusion, and in doing so enters into an elaborate exposition of the various principles on which the different forms of ownership of mines are believed to have been based, and classifies the different laws of the country as being founded on—1. *The Industrial right*, which grants the ownership of the mine to the discoverer. 2. *The Territorial right*, which recognises the owner of the soil as at the same time owner of the sub-soil. And 3. *The Mixed right* (viz. that proposed by the Ministry), which recognises in the owner of the soil the right to work the minerals under his own land without the need of a concession, but which, if he does not work them, gives to the Government the right of granting by decree a concession of such minerals to the discoverer, leaving, however, to the owner of the

soil a certain time for undertaking the working of the minerals himself, which (as the report observes) is equivalent to a real right of preference. A stranger taking the concession is further bound to make compensation to the owner of the soil.

The Commissioners, after giving a full analytical exposition of each of the three systems, indicate their preference for the first of those systems, as being more fruitful for the mining industry where property (as in Italy) is much divided. They point out, however, that in England and in North America, where (to use their own words) "private properties are very extensive, where capital exists in abundance and can be obtained at a low rate of interest, and where there exists a strong spirit of co-operation in joint-stock enterprises, the territorial system was never an obstacle to mining industry."

The Commissioners go on to say that no one can deny the difficulties of consolidation. They recognise that in the controversy about consolidation there comes in the factor of "custom," and that in the different districts of Italy each one prefers the law by which it has been governed up till now; and they come to the conclusion that consolidation cannot be an easy work, and that it is not strictly necessary, though it would be useful to the industry if a way of rendering one legislation acceptable to all could be discovered.

The text of a Bill has since been agreed upon between the Commission and the Ministry, embodying to a great extent the recommendations of the Commissioners in their report with respect to the law of expropriation and partnership, and as to police of mines, but declaring (Art. 28) that the mineral laws existing in the various parts of the kingdom are to remain in force so far as they are not contrary to the proposed law, and omitting all the provisions contained in the original bill of the Ministry relative to the institution of ownership in mineral property. Certain mining regulations (Art. 29) and the establishment of a General Council of Mines (Art. 30) are also provided for. The Council of Mines is to consist of eight members, that is, of two Inspectors of Mines, three members of the Judicial Bench, and three experts in mineral and metallurgical knowledge, while it is to be constituted according to, and exercise all over the country, the functions conferred upon the Council of Mines by the Piedmontese Act of 1859.

No actual legislation has, however, it is believed, as yet resulted from the report of the Italian Commission.¹

Import duties. Coal free; pig-iron 4½*d.* per cwt. (Return to House of Commons September 1893).

¹ It appears that all Bills relating to mines, except the Bill before referred to relating to the surveillance of mines, which has become law, have now been withdrawn. It is understood, however, that the Government propose to introduce a measure before long to abolish the mining rights of landowners in the Neapolitan States, subject to certain compensation for vested interests, in order to put in force the

CHAPTER IX.

BELGIUM.

NOTES AS TO MINING LAW.

FORMERLY, in Belgium, mining was subject in the two following districts to different rights :—

History of Law as to Mining. In *Hainault*, the mining rights were granted by certain Lords High Justiciaries, who, each in his own district, granted such rights to third parties, reserving certain fixed and proportional rents. The owner of the soil had no recognised rights over the mines.

In *Liège*, on the contrary, the mines belonged in principle to the owner of the soil. They could not, as a rule, be worked without his consent, though adventurers appear to have had rights under certain circumstances of following seams and otherwise.

The French Laws of 1791 and 1810 relating to mines were, however, subsequently adopted in Belgium, and up to 1830 none but French laws and regulations were applied in the matter of mines to Belgium.

Since the Revolution of 1830, two laws, viz., of the 2nd May 1837, and the 8th July 1865, have modified some points of the Law of 1810, preserving, however, the essential character of that law. The modifications are as follows, viz. :—

Rights of preference accorded to surface proprietors. The Law of 1837 (Art. 11) recognises a formal right of preference to the concession in the owner of the surface who has a sufficient extent to insure regular and profitable working, and may be possessed of sufficient means to undertake and conduct the work, though the Government may, by the recommendation of the Council of Mines, depart from this rule in favour of a discoverer or of a concessionnaire seeking an extension. As a matter of fact, the Government almost always gives the concession to the owner of the surface if he applies for it.

The owner of the surface can assign his right of preference to a third party (Dupont, 202), and there are cases in which the

Piedmontese Law of 1859 in those States, it being generally acknowledged that, having regard to the small proprietorships which prevail, the system of ownership of mines by the proprietors of the surface acts prejudicially to the development of the sulphur mines in those States.

proprietor of the surface receives a higher royalty from a concessionnaire than the maximum fixed by Government, the concessionnaire having agreed to give such a royalty in order to prevent the surface-owner from applying for a concession; and such a contract has been held to be legal.

This is the same as in France, viz., mines, minières and carrières, the first-named only being reserved from the ownership of the proprietor of the surface.

In cases where the proprietor of the soil does not himself obtain the concession, he is to be entitled to a fixed royalty of not less than 25 centimes the hectare, and also to a proportional royalty of from one to three per cent. on the produce of the mine (Art. 9). The exact rate of the proportional royalty is fixed by the Act of Concession, and the amount of the net proceeds is fixed each year by the Committee of Valuation. The royalty is distributed amongst the proprietors in proportion to the extent of their lands within the area of the concession, but where a concession has been extended the surface-owner of the land comprised within the extension is not entitled to any payment beyond the fixed royalty, unless mineral has actually been worked from under his land (*see* H. & W. p. 46, § 126).

As a matter of fact the fixed royalty varies from 25 centimes to 3 francs the hectare (Dupont, 145).

In fixing the royalty it is not permitted to take into account the damage which the works may cause to the surface, which has to be separately provided for, as under the French Law (Dupont, 145). If the land is occupied for less than a year, or at the end of that time can be restored to its former state, the proprietor of the surface is entitled to double the yearly value of the produce (Art. 43); but if the land is occupied for more than a year, or permanently damaged, the proprietor may require it to be bought at double the value it possessed before the working commenced (Art. 44). This right of occupation can only be exercised by a concessionnaire within the area of his concession (W. & H. p. 48, § 127).

These taxes are the same as in France, viz., a fixed tax of 10 francs per square kilometre, and a proportional tax not exceeding 5 per cent. per annum on the net proceeds (as a matter of fact the proportional tax has remained for a long time at the rate of $3\frac{1}{8}$ per cent.). The net proceeds are arrived at by deducting from the gross sales of a mine all working expenses, but excluding any interest on capital outlay; all products of the mine consumed in working

it are for the purposes of this valuation assumed to have been sold at cost price, or at a higher price, if the Valuation Committee so decide. The value of any new work or new plant can be deducted for the year in which the outlay is incurred; but, if the expenses in any one year exceed the amount of gross sales, there is no power to recoup the balance in any future year or years. No allowance is made for depreciation, but all outlay incurred in any year for keeping up mines or plant is deducted from the gross value of the output for the same year.

The fixed acreage tax is payable under any circumstances; but the Valuation Committee can reduce or exempt the mineholders from the proportional tax in case of unavoidable accident or of any difficulties occurring in working the mine (but, as a matter of fact, this power is not acted upon), whilst so long as the mine is unworked no proportional royalty can be payable as there is no produce.

Valuation The Valuation Committee for the proportional tax
Com-
mittees. of mines is composed of seven members, viz. :—

The Governor of the Province,

Two Members of the Provincial Government designated by the Governor,

Two Proprietors of Mines,

The District Engineer of Mines,

The Director of Taxes.

(W. & H. 33.)

It has resulted from the reservation made in Art. 1 of the Law of 1837 that no concessions have since been made of iron mines, and that in consequence the minières of the proprietors of the soil have become extended into regular mines (Ag. 187).

Under the Law of 1837 (Art. 12) the Government, on the recommendation of the Council of Mines, and after an inquiry, may declare as of public utility the ways of communication necessary in the interests of a mine, in the same way as is provided in France by the Law of 27th July 1880; only in Belgium the indemnity to the proprietor is fixed at double the selling value, including depreciation, cost of reinvestment, and interest for delay (W. & H. § 146), and the Government cannot grant the use of the ways to other industrial establishments besides the mines (Dupont, 371-2). This power of expropriation is quite separate from the right of occupation before referred to, which is only exercisable within the areas of the concession for the establishment of ways strictly *necessary* for the purpose of the mine (W. & H., p. 51, § 196).

Under Art. 11 of the Law of 1810 (modified by the law of 8th July 1865) works which involve the occupation of the surface **unhabited** cannot be opened within 100 metres of habitations **Buildings.** without the consent of the proprietors of the same, if the land on which the works are situate also belongs to them (Art. 11).

Inspection and regulation of mines. A very complete law for the inspection and regulation of mines was passed on the 28th April 1884, superseding previous laws.

Relief funds. Legal provisions are also made for the establishment of relief societies, of which there seems to be a large number established on a similar system to those of France (Ann. Stat. pp. 164-5).

Dealings with concessions. Concessions are occasionally sold or leased, but are more commonly formed into public companies.—*See* evidence of Mons. Hubert to the Mining Royalties Commission.

Forfeiture of concessions. Although Art. 49 of the Law of 1810 applies to Belgium, there is no further provision similar to that enacted by the Law of 1838 in France, and the Article has no practical effect; and, though there appears to be some difference of opinion on the subject, the balance of opinion seems to be that no forfeiture can in fact be decreed unless it is specially provided for by the Act of Concession (Dupont, 319).

Mining administration. There is a complete staff of mining officials appointed by the Crown, at the head of which is a Director-General, having under him divisional directors and several grades of engineers. It is the duty of these officials, under the authority of the Minister of the Interior, to see to the laws, regulations, and decrees relating to mines being carried into effect.

The powers given to the Council of State by the Law of 1810 are in Belgium exercisable by a Council for Mines, composed of a president and four councillors, nominated by the King, their decisions being subject to the approbation of the King (Law of 2nd May 1837). No concession of mines can be granted against their advice.

Questions which arise as to indemnities between owners of surface and owners of mines as to occupation of land have to be determined by the civil tribunals (W. & H. 131).

General remarks. The following statistics are taken from the Government Report of the Belgian Minister of the Interior for the year 1891: The number of subsisting concessions of coal in the year 1890 amounted to 240 (extending over an area

of 137,661 hectares), of which 134 only were being worked. The total production of these was 20,365,960 tons, of a total value of 268,503,000 frs. (or rather less than eleven million pounds), costing in production 209,743,000 frs. (or over eight million pounds), and leaving a net profit of 58,760,000 frs. (or about £2,350,400), divided among 122 concessions, the other 12 having been worked at a loss (*Annuaire Statistique*, 1891, p. 285).

It may be observed that, although the production of finished iron and steel has increased in Belgium of late years, on the other hand, the production of raw material from the metallic mines in Belgium has been greatly reduced, the bulk of raw material being now imported from Spain, the North of Africa, and elsewhere, and that the number of workmen employed in the metallic mines of Belgium has decreased from 11,141 in the year 1860 to 1,427 in the year 1890 (*Ann. Stat.* 1891, p. 284). It is, indeed, understood that most of the mines, excepting those of coal, are practically exhausted.

Import Coal free; pig-iron $2\frac{1}{2}d.$ per cwt. (Return of Foreign
duties. Import Duties, presented to Parliament September 1893).

CHAPTER X.

PORTUGAL.

NOTES AS TO MINING LAW.

THE existing mining law of this country is principally laid down by a law decreed in 1852, but completed in 1853. This law recognises the principle of the separation of certain mines from the ownership of the soil, and the right of concession of such mines by the Government. The classification of mineral substances is somewhat vague, being purely enunciative, and depending not only upon the nature of the substances but also upon the conditions under which they are worked.

The following table is intended to demonstrate the general features of the law so far as it relates to the subject under investigation, viz.:

CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals	Ownership	To whom taxes or royalties payable	Remarks
I. — Beds of Metallic Salt or combustible substances which require excavations and the use of fixed machinery.	<i>In the concessionnaire</i> from the Government or his assigns, the first finder of a mine who registers the discovery in due form being entitled to the concession.	<i>Partly to the Government, viz.:</i> 1st. <i>Fixed</i> , of 80 reis for 10,000 <i>brasses carrées</i> (a mere nominal sum); 2nd. <i>Proportional</i> , an annual sum not exceeding 5 per cent. on the net production. <i>And partly to the surface-owner, viz., one-half the amount of the proportional tax payable to the Government.</i>	Arts. 19 & 40 of the Law of 1852, and a Decree of 15th April 1862.

CLASSIFICATION OF MINERAL SUBSTANCES—*continued.*

Minerals	Ownership	To whom taxes or royalties payable	Remarks
II.—Auriferous Sands and alluvial deposits, where no fixed works require to be set up.	<i>In the owner of the soil</i> , but if he does not work them the Government may, in the public interest, authorise the working of them, even without his consent.		Art. 15 of the Law of 1852.
III.—Substances which may be described as <i>carrières</i> , including building materials, pyrites, chalk, and peat.	<i>In the owner of the soil</i> , but in some cases, where required for public purposes, the Government may authorise a third party to work them, on the worker giving security for the reparation of all damage, or if the owner of the soil prefers it after paying the value of the land and 20 percent. additional.		Arts. 16 & 20 of the Law of 1852.

The taxes and royalties payable to the Government and the surface-owner, in respect of the mines which are the subject of concession, are mentioned in the preceding table.

Taxes and royalties. The Administration has power to lessen the Government charges at discretion, and even to convert them into fixed charges (Article 40). If the Government has given a complete exemption from the proportional rent payable to the State, it must fix a royalty to be paid to the owner of the soil, unless the parties can agree on the subject.

The concessionnaires may occupy or expropriate, under the supervision of the Administration, all land necessary for working the mines; in default of amicable agreement, the law relative to expropriation for public utility is applicable; and concessionnaires may, even without having recourse to the law of expropriation, occupy,

Surface land occupied or damaged.

temporarily, land which may be considered necessary, being bound in such case to give security to make good all damage which may be occasioned. They are also held liable to make good damage caused to the surface by subsidence.

The law recognises two kinds of searches which it treats differently—the first are simple surface investigations; the second, **Searches for mines.** explorations by means of pits and galleries. If the diggings do not exceed 10 varas (11 metres) they come under the first heading. These searches can be undertaken by the owner of the soil or with his consent; or, in default, they can be authorised by the Administration for a term of two years, renewable indefinitely. The explorer must give security against all damage to the surface. Explorations under the second head cannot be undertaken, even by the proprietor of the soil, without the consent of the Government. An exclusive right to make searches may be granted by the Government to a company throughout an area of five square leagues for a term of two years (renewable); searches cannot take place amongst buildings without the written consent of the proprietors under penalty of double the value of damage done. The right of search does not imply any right to dispose of the produce of the explorations.

The law recognises a right to a concession in favour of the finder, that is, of the first person who registers in the municipality of a place the discovery of a deposit, the existence of **Concessions.** which must be admitted by the mining authority. The finder has six months in which to constitute a company or to prove that he has sufficient means to work the mine, in which case a concession should be granted to him. When the finder does not obtain the concession, he has a right to an indemnity fixed by the Administration and payable by the concessionnaire. The Administration may select at discretion between persons who apply concurrently, and also decides at discretion as to the boundaries and extent of the concession. This decision as to the boundaries is not come to immediately on the commencement of the concession; at first only a provisional grant is made, with an approximate indication of the boundaries. The concessionnaire has six months to prepare the plan on which the boundaries are finally determined. The concessionnaire has only a right to the particular substance which forms the subject of his concession. All other substances under the same lands may form the subject of separate searches and concessions. It is said that, under the Portuguese system, the inconveniences inherent to such a system are diminished to a certain extent by the fact that searches cannot be made without the authority of the Government, who, in granting permission for subsequent searches, can safeguard the interests of the first concessionnaire.

The concessions are granted for an unlimited period, but remain subject to the strict supervision of the Government, and at the risk of withdrawal by the State on any infraction of the terms on which they are granted. The concession must not be divided, or even parted with, except by the authority of the Government. It must be actively worked to the satisfaction of the Government, and the works may only be directed by an engineer approved of by the Government.

Although these cannot, apparently, take place without the permission of the Government, they are undoubtedly made, as will be seen from the following instances:—

The concessions of mines of antimony and gold at Oporto, over an area of about 260 acres, held from the Portuguese Government in perpetuity, at the usual taxes, with certain leases of surface and pinewoods at rents of £40 per annum, were sold in 1887 to the Lixa Mining Company, Limited, for the sum of £55,000, of which £28,500 was payable in cash, and £26,500 in fully paid-up shares.

The concessions of copper mines over an area of about 850 acres were sold in 1888 to the Portuguese Consolidated Copper Mines, Limited, for £50,000, payable in cash or shares at the option of the Company.

Easements of way, water, &c. These, where required, can apparently be obtained under the law of expropriation before referred to.

This is provided for, as a penalty for breach of the obligations imposed on the concessionnaire, and especially in the following cases: if he fails to furnish the plan of his concession within six months after the delivery of the provisional grant; if the works are not commenced within two months after the final grant of the concession; if the mine is not kept in a constant state of active work; if the concessionnaire does not take the necessary measures during a specified time in case of danger resulting from bad management of the works; and when, in consequence of improper working, the ultimate working-out of the mine is rendered difficult or impossible.

Inspection and regulation of mines. The law provides for inspection of workings and searches to assure the safety of the workmen and the protection of the soil, and this right of inspection extends to mines of the third class or carrières.

The control of and management of mines is entrusted to a Committee of Public Works and Mines, which is subordinate to the State Department of Public Works, Commerce and Industry (Blue Book, p. 20).

Mining authority. **Import duties.** Coal 1s. 6 $\frac{3}{4}$ d. per ton; coke and briquettes 1s. 9 $\frac{1}{4}$ d. per ton (Return to House of Commons September 1893).

CHAPTER XI.

SPAIN.

NOTES AS TO MINING LAW.

FROM the earliest period at which there is any authentic record of the law as to the ownership of mines in Spain (A.D. 1256) they are spoken of as being reserved to the Crown, who might, however, concede them to third parties; but in early periods the concessions appear only to have been made for the life of the king who granted them.

What is considered in reality the first Spanish law on mines was issued by Don John I. at Briviesca in 1387. By this law all mines were declared to belong to the Crown, but every *native of Spain* was authorised to search for and work mines on his property, or on the property of others with their permission, but paying *two third* parts of the net profits to the Crown. These rights could not, however, be exercised in cases where special concessions were subsisting, such as appear to have been frequently granted and revoked by the Crown, and which were all finally abolished by a law completed in the year 1584, under Philip II.

The Law of 1584 continued in force until 1825, and therefore deserves some attention. By this law *any person* (either a Spanish subject or a foreigner) might work any mines which he discovered, subject to compliance with certain regulations as to registering the circumstances of their discovery and as to subsequent regular working.

The extent of such mines (which were granted as and subdivided into "pertenencias") was limited, but the discoverer was entitled to take several pertenencias. The worker of the mines was obliged to observe certain conditions, including one to the effect that he should employ four workmen for each pertenencia, under penalty of the "denunciation," a system corresponding with what is known in Australia as "jumping," under which he might lose his rights, which passed to the denunciator if he proved that the mine had not been occupied—*i.e.*, worked by a minimum of four men per pertenencia, for four months. Gold mines had to pay to the Crown half the gross

produce, and silver mines from one-half to one-tenth, according to the yield per Spanish cwt. of silver lead. A special administration was constituted to deliver concessions of and exercise inspection over and try questions relating to mines.

Under the Law of 1825 the mining legislation extended to beds of precious stones, and all metallic, and combustible, and saline substances, except beds and springs of ordinary salt (which were reserved to the Crown, and held as a monopoly). The mines were considered as *res nullius*, which any one without distinction of nationality could search for (on making compensation for damage to the soil), and acquire the right to work.

Other mineral substances, such as sand, clay, and chalk, were considered as the property of the surface-owner.

The size of the *pertenencia* was increased, and in principle one person could only acquire two *pertenencias* in contiguity, but to this rule there were exceptions. The property of the concessionnaire was perpetual, and could be transferred and disposed of like other property, subject to regulations as to inspection, including the obligation to work regularly under risk of "denunciation." Such surface land as was required by the owner of the mines could be acquired on paying an indemnity to the original owner of the surface.

In 1849 a new classification of mineral substances was made which introduced a class corresponding to the *minières* of the French system, and other alterations were made in the details of the mining law. Further alterations of the law were made in 1859.

The law of mining was again amended in 1868 by certain general bases, promulgated by a decree of the provisional Government on December 29, 1868; these general bases did not however abrogate the previous law, except so far as it might be inconsistent with them, and indeed reserved the right for owners of old concessions to choose between the old and the new legislation, with this strange result that the mining legislation of Spain now depends upon the construction of two laws based to some extent upon different and even contradictory principles; still it may be taken that the decree of 1868 added to the law of 1859 (subject to some alterations made in 1871 and 1884) constitutes the existing mining law of Spain.

This law recognises the ownership of certain mineral substances as belonging to the State which, however, can only dispose of them in accordance with the provisions of the law. Mineral substances are divided by the law into three classes, according to the following table, which follows the sections of the law, viz.:—

CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals	Ownership	To whom taxes or royalties payable	Remarks
I. Substances (which may be described as <i>carrières</i>) comprising in general all materials of construction, such as slate, sand, stone, lime, marble, and clay, and other substances of an earthy nature.	<i>In the surface-owner.</i>	If let, <i>to the surface-owner.</i>	Art. 2 of Law of 1868.
II. Substances (which may be described as <i>minières</i>) such as metalliferous alluvial soil, alluvial iron ore, ochres, metalliferous deposits from old workings, peat, pyrites, aluminous and fuller's earths, salt-petre, phosphates of lime, baryta, fluor-spar, steatites, &c.	<i>In the surface-owner, but if he does not work them, and the working is declared to be of public utility, they may be acquired by third parties as if they were mines. The surface-owner may, however, instead of working the mines himself, let them to some one else.</i>	If let, <i>to the surface-owner.</i> If the owner works them himself he is free of any Government charge, but if they become the subject of concession (under the circumstances mentioned in the preceding column), they become subject to the Government taxes, as in the case of mines.	Art. 3 of Law of 1868. A Royal Order of the 26th February 1884 adds <i>asbestos</i> to this Clause, and it is understood that the classification is to be considered as indicative rather than limitative.

CLASSIFICATION OF MINERAL SUBSTANCES—*continued*.

Minerals	Ownership	To whom taxes or royalties payable	Remarks
III. <i>Mines</i> , viz., all metalliferous substances obtained by mining and anthracite coal, lignite, petroleum, and mineral oils, graphite, certain saline substances, sulphur, copperas, and precious stones.	<i>In concessionnaire</i> or his assigns.	<i>To the Government.</i> <i>Fixed taxes</i> of 10 pesetas (or francs) per hectare for precious stones and metalliferous substances, and of 4 pesetas per hectare of other mines; and <i>Proportional taxes</i> of one per cent. of the gross produce—that is, of the total value of the mineral extracted, without any deduction for the cost of extraction.	The rents are fixed under a Law of the 25th July 1883, and see Decree of 9th April, 1889.

No royalties are payable to the owners of the surface in respect of the mines which are the subject of concession. The taxes, which are payable to the Government, are mentioned in the preceding table.

The owner of the mines usually agrees with the owner of the surface as to the land which may be required for the purpose of the mine, but in the event of their not agreeing, the owner of the mine may apply to the Governor of the Province for permission to acquire the land by expropriation under the law referring to public utility. In the application of this law the comparative advantage to the public of the working of the mines on the one hand, and the cultivation of the soil on the other, is taken into consideration,¹

¹ The working of mines is generally acknowledged as being of public utility, and it is not therefore necessary for the concessionnaire to show the benefits which will arise to the public.

and, if the expropriation takes place, the surface-owner must be properly indemnified, the purchase-money being ascertained by an official estimation of the actual value of the land required, to which a further amount of 20 per cent. is added.

Any one may make searches for mines in public lands by making excavations not exceeding ten metres in length, but on private lands it appears that such searches cannot be made except by permission of the surface-owner.

These are granted to the first applicant (whether a private individual or a company), provided that he takes not less than four "pertenencias" (the modern "pertenencia" being a square of 100 metres by 100 metres) adjoining each other, so that a concession contains at least 40,000 square metres, except when it is an enclosure between two or more mines, and less than four pertenencias; it is then called a "demasia," and may be given to one of the concessionnaires of the adjoining mines, but if none of them apply for it within three years of the last concession, it may be given to anyone who applies for it.

Any number of pertenencias may be included in one concession, so long as they adjoin one another. The applicant is not required to prove the existence of mineral on the land, or that he has sunk any shaft, or commenced any searching operations. The application for the concession must be made to the Governor of the Province, stating specifically the circumstances of the proposed concession. The application is published in the Official Gazette, and will be granted, if not opposed for sixty days, on the land being proved to be free (from existing concessions). The land is marked out, and a plan and report are prepared by the Government Mining Engineer of the Province. Certain fees (not of any great amount) have to be paid, and the concession is granted by the Governor of the Province and registered. The ordinary form of concession is given at the end of this statement.

When the concession is granted it is perpetual (the system of "denunciation" being done away with in Spain), and can only lapse on failure to pay the taxes payable to the Government for a period of twelve months; or, under a recent law, if the mine-owner refuses to contribute to the general mines drainage scheme of the district.

It is also capable of transfer, like all other immovable property, and may be divided at pleasure, but not into areas of less than one pertenencia each, and can be worked or not at the pleasure of the concessionnaire or his assigns. There is ample authority for stating that the concessions are frequently dealt with by way of sale or lease.

The following observations have recently been made on the subject by a Spanish lawyer of great experience :

"The concessionnaires of mines in Spain are generally disposed to sell the same, and in the majority of cases ask for excessive prices, although they soon reduce and limit their demands when they are convinced of the sincerity of the purchaser, and more particularly if the purchase-money is to be paid on the execution of the contract. They are not in the habit of being favourable to granting leases, although they accept such when the private individual or the company has and offers guarantees for the due carrying-out of the same. Generally, these contracts are made for the term of twenty or thirty years, and upon the payment of a percentage of the products obtained, and increasing or reducing the same according to a scale that is usually fixed, taking as a basis (*e.g.* in the case of lead mines) the price of pig lead in the London market. Some such contracts have been made in this district. 'La Real Compañía Asturiana' of Belgium, and 'T. Sopwith & Co., Limited,' of London, have made contracts for leases. It is almost always usual to mention a fixed price to provide for the event of the lessee during his contract desiring to acquire the property of the mine or mines let on lease, and the lessor undertakes to sell the same at the price agreed upon, which is more or less, according to the term of lease which may have expired."

Proprietors of mines (that is, the owners of the surface as to mines of the first and second classes, and owners of concessions as to mines of the third class), having the power to cede the working of such mines to others, can and do lease them for terms of years. It is usual to let them for five or ten years, renewable at the option of the lessees, subject to a royalty, a minimum or dead rent, and to the regulations regarding the working of mines, and to conditions, including a condition determining the minimum number of workmen to be constantly employed in the mine, under penalty of rescission and forfeiture in favour of the proprietor of all manufactured things, implements, &c., or the payment in cash of a stipulated sum. In this manner the proprietors obtain a guarantee that their mines will be worked.

The royalties reserved are often very high. The circumstances and conditions of mining leases vary so considerably that it is impossible to enumerate the various forms which may be agreed upon, for there is no restriction put upon what is after all a matter of private arrangement between one party who has proprietary rights, which he can sell, lease, or transfer to another willing to acquire them. The following instances of high royalties may, however, be mentioned :—

A rich silver lead mine in the province of Murcia was leased a few years ago by the original concessionnaires to a new company, the latter undertaking to pay a royalty of no less than 65 per cent. of the gross produce, no deduction whatever being made for the cost of working and dressing the ores. This excessive rate was subsequently reduced, but still continues at 45 per cent.

In Sierra Almagrera still higher rates have been paid, and in some cases 80 per cent. has in effect been paid by lessees.

There are also certain mines which have been reserved to the Spanish Government from the ordinary system of concession, and these are sold or let upon lease by the Government at high prices paid down, or upon heavy royalties. It is understood that the Rio Tinto Copper Mine was sold by the Government for over £3,000,000 sterling.

The mine of Arrayanes in the district of Linares is leased from the Government at a fixed royalty of £3 10s. per ton, which, considering the average price of lead during the last five years, is equal to 50 per cent. on the value of the ore.¹

Easements of way, water, &c. Surface wayleaves may also be purchased where necessary for the conveyance of minerals, under the law of "expropriation."

Adjoining mines have rights of ventilation and drainage through each other, being reciprocally bound to make good any damage caused to one another (Art. 24); but, except for these works of safety, it appears that underground wayleaves cannot as a rule be obtained except by agreement, though in some cases the construction of general roads or ways for transport may, it appears, be effected under the law of "expropriation" (Art. 18 of Law of 29th December 1868).

There seems to be no limit as to the number of concessions, which may be obtained either by grant or purchase or otherwise by the same person, but the Government Tax in respect of each "pertenencia" must be paid. As a matter of fact very large areas are sometimes taken, and it is said that great abuses have arisen from the exercise of the right of taking up unlimited areas.

This can only take place in the event of the non-payment of the Government Tax for twelve months, or refusal to contribute to a mine drainage scheme, in which case the concession is put up for sale, and, if no bidder can be found, will lapse, but no forfeiture can take place through failure to work so long as the small fixed rent or tax is paid,

¹ For other examples of dealing with concessions in Spain see evidence of Mr. B. P. Broomhead, Mr. W. Gill, and Mr. E. Wadham to the Mining Royalties Commission.

although the non-working involves the loss by the Government of the proportional tax of 1 per cent.

There is no law in force as to compulsory insurance of workmen, but in the event of accidents recourse must be had to the ordinary tribunals, there being a law in force corresponding, to some extent, with the Employers' Liability Act in this country. It is, however, customary to establish accident and relief insurance funds in connection with different mining undertakings, towards which the workmen and masters contribute.

Accident
or Relief
Societies.

The 22nd Art. of the Law of 1868 contemplated the framing of regulations for securing the safety of men and property, but the rules have not yet been framed, and the mining authorities appear to have no power to interfere with the working of mines in any way beyond settling the boundaries of the concessions. As a matter of fact, however, the Government Engineers do inspect mines with the view of ensuring the safety of workmen and the prevention of unnecessary damage to the surface.

Inspection
and regu-
lation of
mines.

There is a Government Board of Mines at Madrid, and in each Province there are Government Engineers, whose business it is to settle the boundaries of the concessions and to keep plans showing such boundaries, and to act generally as official experts in reference to mining matters.

Mining
adminis-
tration.

Import
duties. Coal 2s. per ton ; pig-iron 9½d. per cwt. (Return of Foreign Import Duties, presented to Parliament September 1893).

Spanish Colonies.

It is understood that the modern Spanish mining system is being extended by degrees to her existing colonies. Thus, in 1883, the principles of the Spanish law of 1868 were extended to Cuba (see *post*, p. 209).

CHAPTER XII.

SPAIN.

FORM OF CONCESSION OF MINES.

Don _____, Civil Governor of the
Province of Jaen.

Whereas I have thought fit to grant to

_____, residing at
_____, a Concession

for a mine situate at
called _____
Sub-district of _____
in this Province.

_____, within the

I have determined, under the date of _____
_____, to issue in his favour the present proprie-
tary title, in conformity with the provisions of the Mining Law
of the 4th March 1868, in respect of claims extending over
_____ square metres in the
form appearing from the annexed Plan, drawn up by the Engi-
neer,
in conformity with the provisions now in force, dated at
_____ the _____ day of _____, the conces-
sionnaire being under the obligation of fulfilling the following
general conditions:—

First.—To work the mine in conformity with the rules of
the art, he and his workmen being subject to the Police Law
prescribed by the regulations.

Second.—To be answerable for all damage and injury which
the working may cause to any third party.

Third.—To make good to his neighbours any damage he may
cause them by the accumulation of water, in consequence of his
works, should he not, on being required to do so, have made such
damage good in the space of time appointed for the purpose.

Fourth.—To contribute, in proportion to the benefit that he
may receive, to the cost of draining neighbouring mines, and of

general drainage and transport roads or ways, when they are opened by virtue of competent authority, in respect of a group of claims or of the whole mining district wherein the mine may be situate.

Fifth.—To strengthen the mining works within the term fixed for this purpose, when, owing to the misdirection of the labours, they may threaten destruction; unless in this he be prevented by *force majeure*.

Sixth.—Not to suspend the working of the mine with a view to its abandonment, without previously acquainting the Civil Governor with his intention, and not to leave the mine in a weak state of repair.

Seventh.—Not to perform any works without previous sanction, within less than 40 metres distance from buildings, roads, and any other public right of way.

Eighth.—To pay for the mine and the products of the same the tax legally imposed, and

Ninth.—To fulfil, in a word, all the provisions contained in the law and regulations affecting concessions of the nature of the present.

Therefore by virtue of this title I grant, in the name of the Government of His Majesty, the property of the aforesaid mine in perpetuity while the preceding conditions are fulfilled, so that he may work the said mine, utilise its products, and freely dispose of same, acting with regard to them as he may desire, subject to the laws, enjoying at the same time all the rights and benefits which, by the mining law and regulations, belong to concessionnaires; and in order that what is contained in the aforesaid conditions may be faithfully fulfilled and observed, alike by the said concessionnaire and by all authorities, tribunals, corporations, and private persons whom it may concern, I issue the present proprietary title bearing the seal of this Provincial Government.

Given at

the Governor
Seal of the Provincial Government
Department of Commerce, Industry and
Public Works
Government of the Province
Department of Commerce, Industry and
Public Works.

CHAPTER XIII.

LUXEMBURG.

NOTES AS TO MINING LAW.

THE French Legislation of 1810 was introduced into the Grand Duchy of Luxemburg at the date of its annexation to France under the First Empire. So far as concerns *History of Law as to Mining.* mines, open workings, quarries and peat bogs, this legislation still continues in force. Special laws have, however, been enacted in recent years respecting the valuable oolitic iron-ore deposits which have been discovered, and which are the only minerals of any importance worked in the country. The first of these laws (viz. that of the 15th March 1870) applies only to the iron-ore deposits in the valley of the Alzette, in the Canton of Esch. Before the passing of this law numerous open workings had, on the one hand, been opened by surface-owners under the name of *minières*, and the State had, on the other hand, granted important concessions of *mines* in the same iron-ore deposits to the Prince Henri (Railway and Mining) Company. In order to meet the difficulties which might otherwise have arisen as to the boundaries between the *mines* and the *minières*, the law of 1870 provided that the iron-ore deposits of the Canton of Esch were to be considered as coming under the head of *mines* forming the subject of concession, when the bed lay at certain depths, differing as regards the right and left banks of the river Alzette; the practical effect, it is said, being to limit the workings of the proprietor of the surface to a depth of 34 metres on the right bank and of 35 metres on the left bank of the river (Ag. § 1358). The law also provided (Art. 2) that no further concessions should be granted until the passing of a further law on the subject.

This second law is dated the 12th June 1874, and is only applicable to iron-ore and manufactures of iron, and does away with the obligations imposed by the law of 1810, securing the right of ironmasters to supply their furnaces with iron-ore from

the mines or *minières* of iron (as was done for France in 1866). The Act, in effect, brings all alluvial iron-ore within the category of *minières*, and places all stratified ironstone outside the Canton of Esch in the category of *mines* (Ag. § 1360). It stipulates explicitly (Art. 1) that every concession must be made by a law, thus implying that it may be granted for such a period and upon such conditions as the Legislature may choose to make. This is said to be a recognition of the principle of "domaniality," by which the State makes a contract with the concessionnaire for the enjoyment of a portion of the State domain, not merely conferring upon him the title to a property which it delivers to him. It follows from this that the State keeps the right to reserve whatever rent the mine is capable of paying, and this the State is authorised to do (Arts. 3 and 5) either in the shape of rent per ton (*une redevance par tonnage*) or an annual rent, which may be considered as a composition for a tonnage rent.

The ownership of minerals in Luxemburg may, therefore, be classified as follows, viz. :

CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals	Ownership	To whom Taxes or Royalties payable	Remarks
I. <i>Mines</i> , viz., the same substances as are contained in the category of mines under the French law, except that in the Canton of Esch all iron ore at depths varying according to whether the land is situate on the right or left bank of the river Alzette, and that outside the Canton of Esch, all stratified iron-stone, is also to be considered as coming under this head.	<i>In the Concessionnaire</i> (or his assigns), who can only obtain a concession by virtue of a law. The concessions are usually granted to the owners of blast furnaces erected in the country, or for works of public utility. The concessions appear to be usually granted for an unlimited period, but the payment of the rent is only extended over a limited period, e.g., 50 years.	<i>Partly to the Government</i> , who may charge a tonnage rent (<i>toccage</i>) or a fixed rent by way of composition of the tonnage rent, proportionate to the rental value of the mine; and <i>Partly to the owners of the surface</i> , the amount being fixed at 5 % of the sum paid to the Government, but not to exceed 10 centimes per ton of the mineral worked.	It appears from an Act dated the 7th July 1874, that the owners of certain blast furnaces have agreed to pay to the State for 50 years in respect of the mines conceded to them a rent of 130,000 fcs., being at the rate of about 750 fcs. per hectare, calculated to be equivalent to 4 fcs. 60 c. to 5 fcs. per wagon (of 10 tons), or about 5 <i>d.</i> per ton. It is understood that the taxes on concessionnaires (besides the royalty which they have to pay to the State as the price of their concessions) amount to from 0·025 fcs. to 0·05 fcs. ($\frac{1}{4}$ <i>d.</i> to $\frac{1}{2}$ <i>d.</i>) per ton, besides communal (parish) and other duties variable with the circumstances of the case, except in the case of concessionnaires holding their concessions for works of public utility, who pay in all 10 cents. = 1 <i>d.</i> per ton of ore extracted. ¹

¹ It is understood that an interesting question has lately been raised before the Council of State, viz., whether the worker is liable to pay, in addition to the 10 centimes per ton, the tax (*impôt mobilier*) on the working capital. The Council of State has not yet decided the question.

CLASSIFICATION OF MINERAL SUBSTANCES—*continued*.

Minerals	Ownership	To whom Taxes or Royalties payable	Remarks
II. <i>Minrières</i> , viz., all iron deposits which are not legally the subject of concessions.	<i>In the surface-owner or his assigns; but they must not be worked except by permission, which cannot be refused except on grounds of public safety or health; and the permission fixes the conditions which are to be observed by the workers with the same objects in view; and it may be suspended, or even revoked, in case of non-observance of such conditions, or of danger to public safety or health, or even to a neighbouring working.</i>	If let, <i>to the surface-owner</i> ; no royalties are payable to the Government; but a law of the 4th December 1863, burdens all open workings of minerals with a tax of 2 % on the approximate value of the ore extracted, after deducting the expenses of working; and see the provisions of the law of 25th December 1889, given on the other side.	This tax affects both mines, <i>minrières</i> , and <i>carrières</i> , which are worked by open workings, and in the case of <i>mines</i> is in addition to the rents payable to the Government and surface-owners.
II. <i>Carrières</i> comprising the same substances as under the French law of 1810.	In ditto (as in the case of France).	Ditto (as in the case of France).	

Surface
land occu-
pied or
damaged

Land occupied for the purpose of working mines must be paid for at double the value, at the choice of the owner of the surface, either of the amount of the damage, or of the value of the ground occupied (Arts. 7 to 11).

Searches
for
mines.

These, it is understood, are regulated in accordance with the French law of 1810.

These, as before mentioned, can only be granted by virtue of a law, and are usually granted (1) to the owners of blast furnaces erected in the country, who will smelt the ore on the spot, or (2) as a subsidy for works of public utility. A form of concession (understood to be the latest granted by the Government) is given below.

Concessionnaires are at liberty to sell or sublet their concessions so long as they keep within the terms of their respective conventions. The Prince Henri (Railway and Mining) Company forms an exception as regards sale.

The leases made between concessionnaires and sub-concessionnaires may be for a lump sum, a yearly rental or royalty (*tocage*).

The original concessionnaires have in some cases made *tocage* contracts, as in the case of the Prince Henri Company and the original workers, under which a royalty is payable for, in some cases, 40 years.

Taxation. According to the terms of a recent law (of the 25th December 1889) respecting the duty on mining operations, there is levied by the State, on the working of iron mines and open workings, in the measures both conceded and non-conceded, a tax of $\frac{1}{3}$ per cent. on the selling price of the ore.

This duty is payable both on the quantity of ore sold to third parties, and on that used by the proprietors or concessionnaires of the lands for supplying their works either in the country or abroad.

The duty is levied on the average sale price of the ore in the various basins during the year for which the duty is imposed.

The mine duty is subject to communal (parish) charges, both for the making of parish roads and for the additional percentages proper (*centimes additionals*).

The above law of 25th December 1889 does not annul or detract from the provisions of Art. 4 of the Convention law of 19th March 1869, in favour of the concessionnaires of the Prince Henri Railway as regards the dues and charges imposed upon them with respect to their mining operations, nor the *conventions-interpretations* which followed, nor similar conventions made with other concessionnaires.

Easements of way, water, &c. The workers of mines have the right to occupy all the surface land other than the site of buildings and adjoining enclosures which are necessary for the working of their mines, including necessary roads and ways (not confined to the areas of the concessions), on paying an indemnity for and occupied as stated previously (Arts. 7 to 11). They may

also be authorised by the administration to establish ways of safety in adjoining *mines* or even *minières*, on paying compensation for damage (Arts. 14 to 16).

The French decree of the 3rd January 1813 (Art. 13), enabling the authorities in case of accidents in mines to take the necessary measures to put an end to the danger and to prevent evil consequences, is established as part of the law of Luxemburg.

There is no compulsory system of insurance, but it is understood that the iron-smelting companies usually effect collective insurances with foreign assurance companies by way of meeting accidents which may befall their men.

This is similar to the Mining Administration of France, the Director-General of the Interior being at the head of the Mining Administration. The powers of the Administration authority. are considerable.

The Director-General may (law of 1874, Art. 13), subject to appeal to the Council-General, interdict all works undertaken contrary to the laws or regulations, or may (Art. 6), subject to a similar appeal, suspend any part of the working in case it is conducted contrary to the conditions of the act of concession or of the regulations, and in such cases forfeiture may even be proceeded for before the tribunals.

The very special feature of the Luxemburg Mining Legislation is the recognition of the system of "domaniality." This General system has, it appears, been adopted advisedly, as the remarks. French system of gratuitous concessions of mines has been entirely condemned in the country. It might consequently be supposed that the worker of mines in this country was at a disadvantage with those of the adjoining countries who obtain their concessions gratuitously; still it is understood that the iron workings of Luxemburg have been able to show profits even in bad times, owing to the great facilities with which the ore is worked and smelted.

The following interesting Report on the special features of the Luxemburg system has been supplied by an English mining engineer having an extensive practical as well as theoretical acquaintance with the subject:

REPORT ON LUXEMBURG BY MR. J. WALTER PEARSE.

The Grand Duchy of Luxemburg is an independent state, the neutrality of which was guaranteed by the Treaty of London in 1867, its area having been reduced to 258,744 hectares, or 639,393 acres in 1839, after its separation from Belgium. It is situated between 49° 35' and 50° 16' north latitude, and between 5° 45' and 6° 30' longitude east of Greenwich, being bounded by the Rhine Province of Prussia on the east,

that of Lorraine on the south, and the Belgian Province of Luxemburg on the west, while the French Department of Meurthe et Moselle adjoins it for about six miles direct length at the south-west corner.

Copper is found at Stolzemburg on the eastern frontier, argentiferous lead at Oberwampach, and antimony at Goesdorf, the last two being to the north-west of the country. These deposits, however, together with the alluvial iron ore, which originally started the iron trade of Luxemburg, are relatively unimportant in comparison with rich strata of limonite minette, or ferruginous oolite, which now constitute the national fortune, and which place Grand-Ducal Luxemburg in the front rank of iron-producing countries. These deposits extend along half the southern frontier, and form part of the measures encountered in the south-east corner of Belgium, the Longwy district of France, and that of the Moselle in Lorraine. The ore which occurs in Luxemburg is, however, richer in metallic iron than that in the neighbouring countries, and is, moreover, so highly impregnated and so intimately mixed with lime that it may, with judicious mixture of ore from the various seams worked, be smelted without any additional flux, while the seams are so near the surface as to be easily worked, and so regular that the quantity of ore in a given area may be calculated with approximate accuracy. As a set-off to these advantages, the coal measures are absolutely wanting in the Grand Duchy; and all attempts to work the bituminous shales, met with in the south-east, have hitherto been commercially unsuccessful. The balance of advantages, however, is so great as to make the little country a favoured spot for ironmasters, its production of pig-iron now attaining one-fifth that of the Zollverein, of which it forms part. The ore, and therefore the pig-iron, also contains just sufficient phosphorus to permit the latter being converted into steel by the Thomas-Gilchrist process, so that all the seven ironworks make "basic" pig, which now exceeds one-fourth the whole production of the country, while this quality is made exclusively at the latest-erected works, and converted into steel on the spot.

In presence of this considerable mineral wealth, the Government determined to strike out an entirely new course, differing in one or other respect from the practice of neighbouring countries. The surface owner has the right to raise ore by open workings; but until 1874 he was debarred from sinking shafts or driving levels. The law of that year, however, gave him the right, when working opencast becomes too difficult, to sink and drive down to a certain depth, about 20 metres or 11 fathoms, actually though not geologically differing in the east and west basins, which are divided by the River Alzette. All below this limit is reserved to the State, to grant in concessions to ironmasters who will smelt the ore on the spot, and to companies who will provide railways for developing the resources of the country. In this way the ore will be more quickly wrought out; but the other products and industries of the country, which are considerable, will also the sooner be turned to account, while the 56 mines are being actively worked, which is far from being the case in the neighbouring countries. The concessions to ironmasters, notwithstanding the somewhat heavy charges attached to them, have given great impetus to the iron manufacture, there being at the present time 22 furnaces in operation, besides the finished steel works already alluded to, employing with mines and furnaces 2,000 men. At the present time two additional furnaces are being built; the foundations are laid for two more; and the erection of

another, higher than any now existing in the country, is under serious consideration. Indeed, the opinion has been expressed that in a few years Luxemburg will be the centre of the basic pig and steel production on the continent of Europe. Thanks to this policy of the Government, the little country is endowed with a railway system larger in proportion to the population than that of any other country in the world.

It is a fundamental principle in the law of Luxemburg that all real and personal property, whether remunerative or not, shall contribute to the State; and the communal or parish authorities are empowered to levy rates on the same basis as the taxes imposed by the State. Now mines differ from all other species of property in this respect, that in proportion as they are developed and become remunerative they also become exhausted, their value, the basis on which a tax is levied, diminishing in inverse ratio. In order, therefore, to prevent the tax from slipping out of the hands of the Government, and at the same time to recoup the local authorities for the additional expense in roads, &c., incurred through the development of the mines, it was found necessary to subject them to a different *régime* from that which regulates other descriptions of property. As a technical abstract of the mining law of Luxemburg has already been given above (p. 139-44), it is unnecessary to recapitulate its provisions; but it will not be uninteresting to state here the arguments of the Government in favour of a new tax on mines, and the reclamations of the ironmasters against it, on the subject being debated in the Chamber.

Up to this period, 1883, although the ironmasters paid the Government an annual royalty, which may be regarded as the price or rent of their concession, they were subject to no State taxes or local rates for their concessible subterraneous mines, and only a Government tax for the non-concessible open workings. As the communal authorities were not empowered by the existing legislation to levy rates on the mines in order to cover the expense incurred on their account, they brought pressure to bear on the Government, which was obliged to propose the application of the 1863 law to concessible mines, thus assimilating them to other landed property. This law, while introducing no new principle into mine legislation, puts mines and open workings on the same footing, and permits them to be saddled with local rates. It was calculated that the tax might amount to 15 centimes = $1\frac{1}{2}d.$ per 10-ton waggon, and if the local rates should reach the same amount, that would only make 30 c. = $3d.$, while the Prince Henri Railway Company pays 1 fr. per waggon, or nearly $1d.$ per ton, and yet finds sub-concessionnaires to work its mines at a profit. Moreover, the slightest accident occurring in a mine would constitute a far heavier charge.

The ironmasters contended that, if the Bill should become law, they would have to pay to the State, as the price of their concessions, 37,500 fr. per hectare (about 600*l.* per acre), and, in addition, the yearly tax at 2 centimes on the 80,000 tons of ore raised therefrom, making together 89,100 fr. per hectare, or 624*l.* per acre, and this irrespective of the local rates which may reach the same amount as the Government tax, while Prussian ironmasters receive their concessions gratis and pay no taxes, those in the Longwy district of France paying only about 2 c., or one-fifth of a penny, per ton, and those in Lorraine only half that amount. In this manner Luxemburg mines would be taxed, not only on the profits, but

also on the value of the raw material, without deducting the expenses of working, so that taxes would be levied even when the mines were worked at a loss.

The Bill, however, was passed, and the new law, coming into operation with the beginning of 1884, continued in force until 1890, when it was superseded by a tax of $\frac{1}{2}$ per cent. on the selling price of the ore, a measure which was made permanent.

Another burning question in the Grand Duchy is the granting, by Government, of mining concessions as compensation for the construction of railways in agricultural districts, which railways may not prove remunerative until the traffic is developed. The ironmasters contend that, if the ore is thus granted for such purposes (and such concessionnaires are at liberty to sell the ore out of the country), it will soon be exhausted, leaving none to supply the furnaces. The representatives of the country districts reply that, as their taxes helped to pay the subvention of 8,000,000 fr.=£920,000 granted for the construction of the Wilhelm-Luxemburg Railway, which was the means of developing the iron industry, it is but fair that this ore should contribute towards improving their means of communication and therefore developing the districts. However, as each concession must form the subject of a separate law, keenly debated in the Chamber, where the ironmasters are largely represented, it is not likely that the ore-bearing ground will be conceded without sufficient reason. It may here be mentioned that the Prince Henri Railway, one section of which was constructed expressly to develop the iron district, received a subvention of 475 hectares=1,174 acres, valued at 37,500 fr.=£1,500 per hectare when calculated at the same price that the ironmasters pay in royalty-rent for their concessions. For a long time the other sections of the line were worked at a loss; but, one after the other, all have now become remunerative. In the same way a concession of 127 hectares=315 acres was granted as subvention for the construction and working of two small-gauge lines by the Luxemburg Secondary Railway Company; and subsequently, on a portion of the concession proving unworkable, other lands were substituted as the Government contracted to give good ore-bearing ground. This is not the case, however, with the ironmasters, who select their concessions in conjunction with the Government mining engineers, taking such concessions definitely for better or worse. Still the renunciation of a concession proved unworkable has been accepted from an iron-smelting company by means of a special law, thus relieving the company from payment of further royalty-rent, though the sums already paid and works executed remain acquired to the State. Two other feeder lines now in operation have likewise been subventioned by ore concessions; and several demands for ore concessions in return for the making and working of proposed railways have been submitted to the Government.

The annual royalty-rent paid by ironmasters for their concessions is 750 fr. per hectare, or roughly 12*l.* per acre, and the hectare contains on an average 80,000 tons of ore with a mean content of 40 per cent. of iron. This amounts to about 12 fr. 50 c.=10*s.* per 10 tons in the central and most valuable portion of the iron district; while for the red seam, which is most highly appreciated, the expenses of extraction, sorting, loading, timber and smithing, including depreciation, sinking fund and general charges, may be put at nearly 25 fr.=1*l.*, so that the total cost of 10 tons of the best ore

put on rails amounts to 80s. Surface property containing iron-ore does not frequently change hands; but a few sales have been effected of late years at prices varying from 15,000 fr. to 45,000 fr. per hectare, or 240*l.* to 720*l.* per acre. So regular are the strata that the ore they contain may be calculated with near approximation; and it may be considered probable that, if 15,000 fr. be paid for a hectare, it will contain 15,000 waggon-loads of 10 tons, so that the 10-ton waggon-load will have cost the purchaser 1 fr. in the ground; but this "Toccage," as it is called, varies from 1 fr. to 8 fr. according to the price paid for the land. Taking an average of 2 fr. and adding 12 fr. 50 c., a rather high estimate for the cost of extraction and incidental charges, the total of 15 fr. or 12*s.* is obtained for the 10-ton waggon of surface ore on rails. This is a high maximum cost price; but it generally happens that, when a high price has been paid for the land, the expenses of extraction are low, and *vice versâ*.

CHAPTER XIV.

TRANSLATION OF THE TEXT OF THE LATEST MINE CONCESSION
GRANTED BY THE GOVERNMENT OF THE GRAND DUCHY OF
LUXEMBURG.

BETWEEN the Government of the Grand Duchy of Luxembourg, represented by M. . . . , Director General of the Interior,

AND the Société Anonyme des Hauts Fourneaux et Forges de , represented by M. . . . , *administrateur délégué* (managing director), domiciled at , has been concluded the following convention :—

Article 1.—Is granted in concession by the Government of the Grand Duchy of Luxembourg to the Société des Hauts Fourneaux et Forges de aforesaid, the mines of oolitic hydrate of iron in the measures capable of being conceded by the State, and underlying the place called in the section and commune of

This concession, as defined by the plan annexed to these presents, is bounded on the south by the line D E F G H, along the *zone de protection*, ten mètres wide, adjacent to Lorraine.

On the north and east it adjoins the boundary A B C D, separating the *concessible* district from the property workable open-cast, forming part of the belonging to the commune of ; finally on the west it is bounded by the line H A, more particularly defined by the road between and adjoining the districts known as and

Thus, embraced by the polygonal figure A B C D E F G H, this concession contains including all the *concessible* portion of the , which contains altogether , but from which are deducted the *esponses de protection*, to be preserved along the Lorraine frontier, measuring

Article 2.—The limits of the concession are definitely fixed by the plan signed by the parties and annexed to the present convention, of which it forms an integral portion.

The Concessionnaire Company accepts the deposit of the plan as definitely fixing the limits of the concession and its conveyance, without any necessity for the intervention of the surface-owners.

In execution of this plan, the representatives of the Concessionnaire Company shall shortly proceed to mark out the district on the ground, the limits being checked by the Government engineers.

If it be ascertained, even after the final marking out, and at any period whatsoever of the working, that among the lands conceded there be measures not *concessible* in accordance with the law of 15th March, 1870, the Concessionnaire Company will be entitled either to additional lands or to a reduction of price proportionate to the value thus deficient.

Article 3.—The Government of the Grand Duchy only guarantees to the Concessionnaire Company the proprietorship of the mines; that is to say, it guarantees no yield of the mines; nor does it guarantee the quality, percentage of metallic iron, or nature of ore, the concession being granted only on the reputation of the lands conceded being ore-bearing.

In the event of any let or hindrance to the working by third parties, the Concessionnaire Company will have the right to take such measures as may be advised for putting a stop to the hindrance, and for obtaining compensation for any damage that may ensue from such let or hindrance.

Article 4.—Remain reserved by the State the lodes of any mineral other than iron, which may be found in the concessions granted by these presents.

Article 5.—The Concessionnaire Company may work the measures with perfect liberty, selecting the most suitable seams; the company will be held bound to work the mines in accordance with recognised methods, and, *en bon père de famille* (like a good family man), it (the company) will take all necessary measures so as not to compromise the complete working out of the measures, either during the operation of the present convention or at its close; it will conform to the laws, enactments, and regulations as to the working of mines in the Grand Duchy of Luxemburg; it will provide the necessary timbering for the workings, keep up pillars of sufficient thickness, and line the workings with masonry wherever required by the nature of the measures.

Article 6.—In return for the advantages granted by the present convention, the Concessionnaire Company undertakes to pay every year to the Government of the Grand Duchy of Luxemburg, for fifty consecutive years, a rent of 32,925 francs (=£1,303.)

The first payment of this rent is to be made on the 31st day of December 1887, and the last on the 31st day of December 1937, at the office of the Receiver, Esch-sur-l'Alzette.

The State undertakes to pay the royalty due to the surface-owner.

As the price of the concession is payable in fifty years, the Concessionnaire Company is entitled to work each year the fiftieth part, or 50 ares = $1\frac{1}{4}$ acre. Consequently, if in one year more than this area be worked, the excess shall be paid to the State on the basis of 37,500 francs (= £1,484) per hectare (about $2\frac{1}{2}$ acres), unless the total area worked since the granting of the concession be less than that which the Concessionnaire Company had the right to work.

The excess thus paid during one or more years shall be allowed for during the following years, during which the Concessionnaire Company shall work beyond the average.

Reports drawn up each year in June and December by the Ingénieur des Mines (Government Mining Engineer), and checked by the Concessionnaire Company, will constitute a record of the areas actually worked.

Article 7.—The Government undertakes not to grant gratuitous concessions, but to allow the Concessionnaire Company to profit by any legislative measure which may improve the condition of iron-masters.

Article 8.—The Concessionnaire Company may compound its annual payments by paying their present worth at 5 per cent., or by partial repayments, the whole without prejudice to the advantage secured by Article 7.

Article 9.—The Concessionnaire Company may cede or farm the whole or part of its concession on condition that the sub-concessionnaire or tenant provide all necessary guarantees of solvency.

The sub-concessionnaire or tenant is legally reputed solvent if he provide a bail ensuring the execution of all the engagements to the State provided by the present convention.

The Concessionnaire Company has the right to dispose of its concession as it pleases, if the yearly payments have been compounded in accordance with Article 8.

All the provisions of the present convention are applicable to the tenants, sub-concessionnaires, or assigns of the Concessionnaire Company.

Article 10.—In the event of the Concessionnaire Company using or ceding the conceded ore for traffic, the present convention may be annulled with damages in favour of the State.

Article 11.—The Government is empowered to require from the Concessionnaire Company sufficient security, either by bail or by mortgage, for the payment of three years' rent as above reserved.

Article 12.—The Government is empowered to stop the working temporarily if the Concessionnaire Company be two months in arrear with the rent.

The Concessionnaire Company becomes in arrear by the mere fact of the date expiring on which the rent is due, and without the necessity of any legal formality. Interest at the rate of 5 per cent. becomes legally due on all sums not regularly paid to date.

If there be any danger in delay, the Government may stop the working at any time, even before the expiration of the period for which the rent is due. A delay of more than two months may be granted for payment of the rent if there be no danger in delay, or if the Concessionnaire Company have worked less than the average provided for by Article 6. The granting of delay carries with it *de plein droit* suspension of all hostile measures provided for by the present Article.

Article 13.—If the year's rent be more than six months in arrear, the Government may apply to the Courts to cancel the agreement, and also for damages in proportion to the loss incurred by the State through non-execution of the contract.

In this case, as well as in all others in which the Government has the right of cancelling the convention by virtue of the general provisions of the law as to the regulation of mines and open workings, all proceedings for cancelling will be stayed, if, before final judgment, the Concessionnaire Company satisfy the claims of the Government.

On the other hand, if the cancelling be pronounced, the Government has recourse against the Concessionnaire Company or its legal representative.

Delay of more than six months may be granted for payment of the rent in the cases provided for by the last paragraph of the preceding Article; and the granting of such delay carries with it *de plein droit* the suspension of all proceedings for cancelling the agreement.

The provisions of Article 2 of the law of 21st May 1879, which approves the compromise convention of 18th March 1879, as to the mining concessions dealt with by the law of 7th July 1874, are applicable to the present convention.

Article 14.—In all cases in which the present convention is cancelled, by virtue of the above stipulations, or owing to any other cause, and also at the expiration of the term, the Concessionnaire Company, or its legal representatives, are entitled to remove from the concession the working plant which they have added, and which may be withdrawn without prejudice to the mine, subject, however, to paying to the Government all the royalties due, and subject also to the option of taking over at a valuation by the Government, or other concessionnaires, of all objects which they may consider useful for working.

Article 15.—The Concessionnaire Company is responsible before the law for all damage which its working may cause the surface-owners or other persons.

Article 16.—The Government undertakes to apply and cause to be applied, in the sense most favourable for mine workers, the provision of Article 25, paragraph 5, of the Specification of 27th February 1869, annexed to the law of 19th March 1869, in such a manner that the railways conceded, or to be conceded, oppose no obstacle to any private lines that may be laid to facilitate the economical working of mining property.

The Government undertakes, moreover, not to renounce by new conventions the right of decreeing expropriation on account of public utility in cases wherein the right of expropriation may be considered as applicable to the iron industry in accordance with existing laws.

Article 17.—The Concessionnaire Company must elect a single administrative domicile, which it will make known by a declaration addressed to the member of the Government charged with the direction of mines.

Article 18.—Any disputes to which the interpretation of the present convention may give rise are to be settled, in the first instance, by three arbitrators, to be appointed, through the initiative of one or other of the parties, by the President of the High Court of Justice.

Article 19.—The present convention is not to come into force until after it shall have received the sanction of the Sovereign. It will be registered at the fixed rate of 5 francs (=4s.), and a copy delivered gratuitously, excepting the fee of the conservator.

Executed in duplicate at Luxemburg, the 20th November 1886.

(Signed) (Signed)

CHAPTER XV.

NOTES AS TO MINING LAW OF RUSSIA AND OTHER COUNTRIES.

IN the case of the countries specifically referred to in this chapter, the mineral resources of which are not of great importance, or have not as yet been developed to any very great extent, no attempt has been made to analyse the laws in detail, but it is proposed to state shortly the principles which they recognise with respect to the ownership of minerals, and to give some slight account of the effect of the legislation relating to mineral property in each country.

RUSSIA.

Russia acknowledges the principle of *accession* as the fundamental principle of its mining law, in the case of private properties the proprietor alone having the right to work or to grant the right of working minerals, with the exception of the royal mines of gold, silver, and platinum; and being only under the obligation of giving notice to the administration for the purposes of inspection on opening a mine, in accordance with the 22nd section of an Ordinance of 18th August, 1880; whilst in the extensive Crown lands, where the Crown does not itself work the minerals, it appears in some cases to let the right of working, whilst in other cases it appears to admit a kind of customary right to concessions by discovery as in Germany, and in other cases the right to minerals in particular districts is annexed to certain manufactories in such districts. As to concessions in Crown lands, there appear to be regulations of 1869 as to coal in the Don Cossacks district, of 1870 as to gold-bearing sands, and of 1872 as to petroleum.

Coal and Peat :

Import duties.	Imported at Baltic ports	per ton, 1s. 11 $\frac{3}{4}$ d.
	Imported at ports of the Black Sea and Sea of Azov	„ 7s. 11d.
	Imported across the Western land frontier	„ 3s. 11 $\frac{1}{4}$ d.
<i>Coke :</i>	Imported at Baltic ports	„ 2s. 11 $\frac{1}{2}$ d.
	Imported at ports of the Black Sea and Sea of Azov	„ 9s. 10d.
	Imported across the Western land frontier	„ 5s. 11d.
Coal, Coke, &c., imported at White Sea ports free.		
Pig-iron	per cwt. 4s. 11d.	

(Return to House of Commons September 1893).

The mineral law of Finland appears to be similar to that of Sweden.

NORWAY.

Searches may be made for mines either by the proprietor or by anyone who obtains an order from the administration, and the finder of minerals can obtain a concession to continue so long as he works continuously, the proprietor in the case of private lands being always entitled to a tenth part of the produce. There is a comprehensive mining law dated the 14th July, 1842.

SWEDEN.

Minerals, with some exceptions, are dealt with in this country by a system of concession, the owner of the surface having the right to associate himself to an extent not exceeding one-half in the profits of the undertaking on contributing an equal proportion of the expenses. The mining law is dated the 16th May, 1884. An import duty of 5 $\frac{1}{2}$ d. per cwt. is charged on pig-iron.

HOLLAND.

The principles of the French law were extended to this country by Napoleon, and are still followed with some modifications, special conditions being apparently made in the case of each new concession.

SWITZERLAND.

Each canton which enjoys any mineral wealth possesses its own special mineral legislation, founded apparently on the legislation of the larger adjoining countries of France, Germany, and

Italy, and recognising as a rule either the principle of domaniality of the State or of concession by the State over certain substances, with rights in favour sometimes of the first finder, sometimes of the first petitioner, and sometimes of the owner of the surface; but the whole subject is of no great practical importance, the mining industry in Switzerland being of inconsiderable extent.

TURKEY.

The Turkish law of the 3rd of April, 1869, recognises three classes of minerals, viz., mines, minières, and carrières, corresponding to the three classes similarly named under the French law.

Mines can only be worked by virtue of an Imperial Iradé. This gives a concession for 99 years, during which period the mines may pass by inheritance or sale (but by sale only under official authorisation).

Persons may search for mines on their own lands, and also on those of others with their authorisation, but not without, except by special official authorisation.

Minières may be worked in perpetuity by the owner of the soil by virtue of a firman, which he is bound to obtain for the purpose; but if he does not work them the working may be conceded to another person, who will pay double value for the land, and a fair price for buildings and other accessions.

Both mines and minières are subject to inspection by the Government engineer.

On obtaining a concession the concessionnaire pays from £50 to £200 (Turk.) according to the value of the mines. He afterwards pays two species of *redevance*—1st, of five paras per deunum of land comprised in the concession (payable to the owner); 2nd, the *redevance* proper, which varies from one to five per cent., according to the richness of the mine, and is fixed in the firman of concession.—(Legislation Ottomane droit Administratif, 1875, by Aristarchi Bey.)

Concessions may become forfeited by reason of non-payment of the mining taxes; for want of commencing working within a year from the granting of the concession; through suspension of the works for a year, except in the case of *force majeure*; through not having paid the indemnity due to the discoverer; and for having resisted on three different occasions the visits or directions of the Government engineers; but the forfeiture appears to be at the discretion of and not obligatory upon the Government.

Carrières are not subject to the general provisions of the mining law.

Coal or lignite, also iron and steel of all kinds, 8 per cent. *ad valorem* (Return presented to Parliament September 1893).

GREECE.

The mineral products of Greece are at present chiefly silver and lead (from the ancient mines of Laurium) and zinc.

The legislation of Greece as to mines contained in a law of August 22, 1861, amended by several more recent laws, resembles that of France, the only important differences apparently being that in Greece the owner of the surface has only a right to a preference of permission to work a *minière* instead of being (as in France) entitled to the *minière* as owner, and that the workers of both *minières* and *carrières* have to pay a royalty tax of 10 per cent. of the net produce to the State.

BULGARIA.

The principal mineral productions of the Principality of Bulgaria are stated to be iron and coal, which (according to a British Consular Report of 1877) are believed to be capable of considerable development.

A law on mining was passed during the session of the Sobranje, and approved by Princely Oukaz on December 12, 1891. The following are short particulars of this new law.

All minerals, wherever discovered, are regarded as the property of the State (Art. 1). They are considered as divided into (1) Mines, comprising specified metals, coal, &c.; and (2) Quarries, comprising iron pyrites, building materials, &c.; and any dispute as to the classification of any mineral is to be finally settled by the Minister of Finance in consultation with the Administration of Mines (Arts. 2-5).

No one can make searches on his own or other persons' property without a permit, which may be granted (to persons certified by the local mayor to be of good character, and giving guarantees against damage) for one year, renewable, or if for exclusive search within a reserved area of 800 hectares for two years on payment annually of 10c. (1*d.*) per hectare. Within the two years the prospector must demand a concession, and he must not search under buildings or 50 metres around them except by special agreement, or where the Minister of Finance grants permission in specially important cases (Arts. 6-23).

Prospectors within reserved areas have a preferential right to concessions; in other cases the preference is given to the first applicant; or, if several persons apply together, to them in common. The areas of concessions are not to be less than

24 hectares, or to exceed 500 hectares in rectangular form, the short side of the rectangle not being less than one-quarter length of the long side. Concessions are granted for 99 years. The grant of the concessions for certain specified State coal mines, and silver, lead, and copper mines, is to take place in accordance with the law for public tenders, unless the State should decide to work them itself; so also in the case of any mine which should thereafter be discovered by the State (Arts. 21-40).

Concessions may be disposed of or abandoned during their terms, but mines must not be sold in part or materially divided without the permission of the Minister of Finance, and a cession of the entire mine must be notified to the proper authorities. Mines may also be united by permission. If a concessionnaire should interrupt or reduce the working of his mine, or unduly raise the selling price of the extracted mineral so as to injuriously injure the interests of the country or the wants of the consumers, the Minister of Finance may impose on him special conditions for the working and prices, all differences of opinion which arise being settled by arbitration (Arts. 39-46).

Every concessionnaire is to pay to the State Treasury a fixed royalty of 3 levs (2s. 6d.) for coal and iron mines, and 4 levs (3s. 4d.) for all other mines per hectare, and a proportional royalty to be fixed in the concession, and not to exceed 5 per cent. of the net profits (Art. 47).

Land may be taken for mining purposes within or beyond the limits of the concession, with the consent of the Administration, and by indemnifying the owner, who may in certain cases demand its expropriation (Arts. 51-6).

The law also provides for the relations between neighbouring mines (Arts. 57-62), and for the withdrawal of concessions in default of payment of royalty, and in other cases (Arts. 49 and 63-4), and for the working of mines under the supervision of the Minister of Finance by means of the special Mining Administration, and subject to regulations (Arts. 55-7), and for penalties for infraction of the law (Arts. 68-74).

Coal or lignite, and iron and steel of all kinds, 8½ per cent. *ad valorem* (Return to House of Commons September 1893).

SERVIA.

Servia also enjoys the possession of a lengthy mining code (containing 159 Articles) dated the 15th April, 1866, the chief features of which resemble those of the Bulgarian mining law as analysed above.

CHAPTER XVI.

AMERICA (UNITED STATES OF).

NOTES AS TO MINING LAW.

IN considering the subject of the Mining Laws of this country, there should be constantly kept in mind the distinction which exists between the Federal public lands and lands owned by the States or by private individuals, the latter class being divided into State lands and strictly private lands. The separate States, however, own their lands by the same title as private individuals, namely, by grants from the Crown in the case of the 13 original States and from the Federal Government in the case of the more modern States. Having regard to the important distinction before referred to between public and private lands, it is proposed in these notes to deal with the laws affecting the two different classes of land so far as may be separately.

I. AS TO PUBLIC LANDS.

It is also necessary, in order to comprehend the state of the law as to mines in this country, to have regard to the general law of the country as to the alienation of *public lands* to individuals or companies, it being distinctly to be understood that as a general rule, if public lands are granted to individuals or companies, no matter for what purpose, agricultural or otherwise, or at what price, and whether they are known to contain minerals or not, *all mines beneath the surface, as well as the surface itself, pass to the grantee.*¹

Originally the Government of the United States sold off extensive tracts of land by ordinary grant in fee simple,² but by an Act of Congress of the 10th of May 1808 a system of

¹ An exception to the common-law rule here stated is furnished by the case of private lands bought from the Government since the passing of the Mining Law of 1872, in the States and territories to which that Act applies. Such lands are owned subject to the right of the locators of lodes having their tops or apexes in lands adjoining, to "possess and enjoy" the said lodes in their downward course through the (otherwise) private land.

² A most interesting and graphic account of the origin, progress, and operation of the Federal mining legislation was given in evidence to the Mining Royalties Commission by Dr. R. W. Raymond, Secretary of the American Institute of Mining Engineers.

sale in detail was established, the main features of which continue to the present day. Under this law no sale of public lands may be made until after *survey* by Government officials, when land may be bought in sections, through the medium of the Land Office, at the minimum price (for agricultural land) of \$1.25 per acre. The purchaser receives a title deed called a "Patent" (signed by the President or some one appointed to represent him, and sealed with the seal of the United States), which confers upon him the fee simple or absolute ownership of the surface and the subsoil. Certain rights of preference were, however, formerly accorded to squatters, settlers, or those who had established "homesteads"—that is, to the first occupants of the land, who had improved it either by cultivating it or by building houses upon it. Such persons might occupy the land and, after survey and payment of the price of \$1.25 per acre, might become entitled to the absolute ownership. This privilege, however, only extended to agricultural lands as distinguished from mineral lands or other land reserved for purposes of public utility.

Until recently there was no special Federal legislation as regards ownership of mines; the old (common law) patents gave a title both to the surface and to the minerals beneath the land which they comprised without any restriction, as they still do in the States of Wisconsin, Michigan, and Minnesota, which were excepted from the provisions of the recent Federal mineral legislation. (See Revised Statutes, s. 2345). Mineral lands forming part of the *public lands* (which appear to be all practically situate in the Western States and territories) are now subject to the special provisions of an Act passed in 1872, which will be more particularly referred to hereafter. The Government or Administration of each State or territory only intervenes as a rule by regulations made exclusively for the protection of the workmen employed in the mines.

"A patent of land from the United States passes to the patentee all the interest of the United States, whatever it may be, in everything connected with the soil, or forming any portion of its bed or fixed to its surface; in short, everything embraced within the term 'land.'" The above is the language of the Supreme Court of California in certain celebrated cases,¹ in which agricultural grants made by the Mexican Government before the acquisition of California by the United States were subsequently confirmed by the latter, and patents issued accordingly. The original grant by Mexico confessedly did not convey the precious metals in the soil; but it was held that the

¹ *Moore v. Small* and *Fremont v. Flower*. 17 Cal. Rep. 199.

patent of the United States did so nevertheless, and this doctrine has been repeatedly reaffirmed by the Courts of the United States. It is true that the United States has at times withheld mineral lands from sale; has at other times fixed special conditions for their sale; has excepted them from Railroad grants, &c.; but when (without fraud) a piece of land, not officially known and described as mineral land, has been sold to a private party or granted to a State or a Railroad Company, and a patent has been issued for it, the patent gives the complete common-law right—and more too—for it waives what the common law reserves, the right of the sovereign to the precious metals. There is but one exception—namely, that of the right of the locators of lodes having their tops or apexes in lands adjoining, to “possess and enjoy” the said lodes in their downward course through the (otherwise) private land.

In the State of Pennsylvania it is understood that gold and silver mines are reserved to the Penn family, whilst the State of New York has a special law on the subject of such mines, though it is understood that in neither of the last-mentioned States is the subject of practical importance, as no such mines have been discovered in either of them. The law of New York is set out in the Blue-Book before referred to, pp. 43–45. The Federal Government, as such, never appears to have set up any claim to right of sovereignty in or over the precious metals.

“The motive underlying the earliest congressional legislation touching the public mineral lands was to secure a revenue therefrom. To this end the system of leasing the lead and copper mines was adopted in 1807, with its attendant agencies, accountings, &c. After a trial of nearly forty years the system was pronounced a failure, and in 1846 the mines were offered for sale, with a preference right in those who had leases or were in the occupation of the mines. When the gold mines of California were discovered, and the varied mineral wealth of the Pacific coast was brought to the attention of Congress, several revenue Bills were introduced at different times, and were earnestly debated; but the notorious failure of the lease system in the Mississippi valley, and the difficulties in the way of securing a revenue otherwise, gave success to the friends of free mining in 1866.”¹

The proprietorship of the minerals is not, however, necessarily inseparable from that of the surface; as a matter of fact, under the Federal Mining Act of 1866 the United States sold numerous

¹ Extract from the Mining Laws, Rules, and Regulations published by the Tenth Census Office of the United States in 1885.

mines, without selling the surface above them. All that it granted in such cases as to the surface was an easement—that is, the preferential right to use it for mining purposes. The same surface was, to this extent, sold over and over again to different parties, and sometimes owned besides by citizens not miners, who built houses upon it; only, the miners (in the order of priority of claim) could take it if they needed it, paying for the damage done to other occupants. The Act of 1872 abrogated this state of affairs; and now the United States issues no patents for mines alone. Its mining patents always convey a full title to land, and the ownership also of the minerals therein with the exception, heretofore noted, of the extra-lateral lode-rights of adjoining owners.

It may here be remarked that the actual law of the United States of America as to mining seems to have been founded to a great extent upon customs which had grown up in California previous to the passing of the first Federal Mining Law. These customs do not, however, appear (as might naturally be supposed) to have been derived to any great extent from the law of Mexico, to which country California originally belonged. The only principle common to the Mexican law and the customs of the early miners in California seems to have been that of the tenure of a mining-claim by continued occupancy and working. The principle of a demarcation of surface-area limiting the underground rights, and the principle of a royalty payable to the Government, the two leading characteristics of the old Mexican system, found no lodgment whatever in California. On the other hand, the principle of longitudinal measurement (so many feet of a lode in linear extent, or so many feet along the course of a stream, whatever the width of the lode or "gulch" might be) and the principle of the right to follow a lode "on its dip," between the end limits of the claim, wherever it might go, which were the two leading and controlling features of the California system, had never existed in Mexico. In fact, it would be surprising that the California system was so utterly unlike that of Mexico, but for the historical explanation that, although California had belonged to Mexico, there was no mining in California until after the annexation; that the alluvial mining which then began was quite unlike the deep mining of the Mexicans; and that the miners themselves were adventurers from all parts of the world, among whom the old Californians formed a small part only; as a rule, indeed, they were engaged in other occupations.

Even as regards the one point in which the Mexican and Californian systems agree, the importation of that principle into

the Californian system was probably not due to Mexican influence. The principle of possessory tenure, dependent upon continued work, is probably German in origin, and passed from Germany to other countries. Together with all the other peculiarities of the Californian system, it was adopted under the pressure of the peculiar circumstances of the case, a great rush of population to the gold-fields, more people than room for them, no courts, no surveyors, and an overwhelming necessity for simple rights of property, based on priority and possession, and determinable by mere tape-line measurement, without surveying. These causes adequately explain the whole result.

For 18 years after the annexation of California the Mining Law of that country depended entirely upon the miners' customs, regulating not only dealings with the mines, but also with water required in connection with the mines.

It was in 1866 that the first Federal law was passed as to the mines in the territory acquired from Mexico, or (it is believed) any territory west of the Missouri River. But there had been legislation long before that concerning the lead-mines of what are now the States of Illinois, Iowa, Missouri, &c. In 1807, five-year leases of lead-mines by the Secretary of the Treasury were authorised. After much trouble, the experiment of leasing mines on the public lands was abandoned in 1846. The mineral lands belonging to the United States have since been either withheld from sale or offered for sale under various Acts *applying to different sections of the country*. The Act of 1886, and the subsequent Act of 1872 (as before observed), did not apply to public mineral lands in Michigan, Missouri, and Minnesota, which were then, and are still, for sale like agricultural land, by virtue of previous Acts.

The law of 1866 differed from that of 1872, in that it provided for the sale of *a lode*, with an easement as to surface, whereas the Act of 1872 provided for the sale of *the land*. Again, the law of 1866 did not make the rights of the locator dependent upon his possession of the "apex" of the lode he discovered, and on which he located his claim. The law of 1872, hence called "The Law of the Apex," makes the whole ownership of a lode dependent upon the possession of the apex. (*See section 2322, Revised Statutes.*)

The law of 1872 is set out in the Revised Statutes of America (reprinted with Amendments in 1878), by which it is declared, under Title xxxii. s. 2318, that in all cases lands valuable for minerals shall be reserved from sale, except as otherwise expressly provided by law; and (s. 2319) that all valuable mineral deposits in lands belonging to the United States are

thereby declared to be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase, by citizens of the United States, and those who declare their intention to become such,¹ under regulations prescribed by law and according to the local customs or rules of miners in the several mining districts, so far as the same are applicable and not inconsistent with the laws of the United States.

It has resulted from the recognition of the principle of combined ownership of the surface and the mines that a division is made of public lands with reference to mines, not by dealing with the different mineral substances apart from the surface, but by dividing lands known to contain minerals from purely agricultural lands; the mineral lands being again divided amongst themselves according to the classification shown in the following Table. It must, however, be kept in mind that the division has reference to the original grants made by the Federal Government, as "Lord paramount" of part of the *public domain*, corresponding with grants from the Crown in England, and does not in any wise affect private or appropriated lands.

¹ Under an Act passed in 1880 claimants for patents of mineral lands who are not residents of the land districts in which such lands are situate may make the applications and the necessary affidavits through their authorised agents. It is no doubt under this provision that many persons who are not and do not intend to become citizens of the United States obtain patents.

CLASSIFICATION OF PUBLIC MINERAL LANDS.

Mineral lands	Ownership	To whom taxes or royalties payable	Remarks
<p>I. <i>Vein or lode</i> lands, i.e. lands containing veins or lodes of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits. (S. 2320.)</p>	<p><i>In first occupant</i> who is a citizen of the United States, or declares his intention to become such, and makes a claim to be afterwards completed by Patent granted by Government on proof of expenditure of \$500 in labour or improvements and on payment of \$5 per acre and fees.</p>	<p><i>If let, to the locator of the claim or his assigns.</i> The Government of each State has the right to impose taxes on the produce of the mines, but this is not generally done; such a tax, however, appears to be imposed in the State of Nevada (Law of 28 Feb., 1871), and in the State of South Carolina (as regards the mining or dredging of phosphate rock in navigable rivers alone). (See Blue Book, p. 46.)</p>	<p>The extent of each claim is left to local regulations, provided that it shall not exceed 1,500 feet in length, or 300 feet in width on each side of the vein at the surface, and provided also that local regulations shall not fix the maximum width of a lode-location at less than 25 feet on each side of the middle of the vein at the surface, except where adverse rights existing prior to May 10, 1872, render such limitation necessary. (S. 2320.) And the locator is entitled not only to the surface and to all mines below the surface, but also to follow lodes or veins in a downward course into adjoining lands. (S. 2322.)</p>
<p>II. <i>Placer</i> lands, i.e. lands containing all forms of metallic deposit except veins of quartz or other rock in place.</p>	<p><i>In ditto</i>, the price paid for acquisition, however, being only \$2½ per acre.</p>	<p>Do. do.</p>	<p>The extent of placer claims is limited to 20 acres for individuals and 160 acres for associations, but <i>placer</i> claims do not give the right of following veins into adjoining lands, the rights of the locator being strictly confined to the area of his claim.</p>

CLASSIFICATION OF PUBLIC MINERAL LANDS—(continued).

Mineral lands	Ownership	To whom taxes or royalties payable	Remarks
III. Coal lands .	<i>In ditto</i> , the price being not less than \$10 per acre when lands distant more than 15 miles from any completed railway, and not less than \$20 per acre when within that distance. (S. 2347.)	Do. do.	The extent of claims on coal lands is limited to 160 acres for individuals or 320 acres for associations, but an association of not less than four persons can obtain 640 acres on proving that they have expended \$5,000 in labour or improvements. (S. 2348.)

Section 2352 provides that nothing *in the preceding five* sections shall authorise the sale of lands valuable for mines of gold, silver, or copper. But these five sections comprise the law as to the acquisition of coal-lands, and the only purpose of section 2352 is to forbid the acquisition of a large tract as *coal-land*, if it is at the same time valuable for mines of these metals. In that case, it must be acquired *in smaller parcels*, under the provisions of the Statute covering gold, silver, and copper mines. (Sections 2319, 2320.)

The category of agricultural lands is made by the surveyors of the Government. Whether a limestone or chalk quarry shall be acquired by an agricultural or by a mining patent, depends upon the manner in which the land has been classed. If the regular Government land survey has not yet been made, the land could be located under sections 2325 and 2329. The popular term for such a location of a lime quarry is "lime-placer."

There is a special law (Statute of 1877, ch. 18) as to *Saline* lands under which they may be sold (except in States which have not had a grant of *Salines* by Act of Congress) at a price not less than \$1.25 per acre.

As soon as a claim is made in accordance with the regulations of the district, the claimant has a right to search not only for the mineral substance, the existence of which is supposed
Searches for mines. to have been acknowledged to justify the regularity of the location, but also for all other minerals which may exist within the boundaries of the claim; and the locator of a vein in rock may, even before obtaining his patent,

follow the vein in a downward course with all its dips, angles, and variations outside the vertical limits of his claim.

This extra-lateral right is limited by vertical planes drawn through the end-lines of his location, which end-lines must be parallel. The locator cannot go beyond these planes. And if the location is defective in essential particulars (*e.g.* has not parallel end-lines), the extra-lateral right is forfeited.

Union and Division of Claims.—It follows from what has been said that claims may be united or divided at the will of their owners, subject to the necessary conditions prior to the acquisition of a patent being duly performed in respect of each claim.

Forfeiture of Claims.—It will also be seen that, until the acquisition of patents, claims may become forfeited through non-observance of conditions without any previous official declaration, in which case the land becomes open to occupation and location as in the first instance.

By section 2323 owners of tunnels run for the development of a lode or the discovery of mines have the right and possession of all veins or lodes within 3,000 feet from the face of such tunnel on the line thereof not previously known to exist to the same extent as if discovered from the surface (though patents cannot be obtained by tunnel-owners until they have located claims on the surface covering the lodes discovered); but failure to prosecute the work on the tunnel for six months shall be considered as an abandonment of the right to all undiscovered veins on the line of such tunnel.

By section 2324 it is provided that patents may be obtained on application showing compliance with conditions under oath; applications to be posted and filed in Land Office and to be published. Claimants to prove that they have expended \$500 worth of labour on improvements.

By section 2326 it is provided that adverse claims are to be decided by the Court, and, these being disposed of and \$5 per acre of claim and fees being paid, patents are to be issued.

It must be understood that by the mere fact of the *location*, or occupation, made in conformity with the laws and customs, a person acquires with respect to mineral lands (by a system analogous to that which is followed with respect to agricultural lands, the right to which is acquired by occupation) a private right of possession within a certain area, called a "claim," the limits of which are fixed by the laws and customs. The locator of a claim may deal with it and transfer it at pleasure, without the obligation of obtaining a patent: but under the express condition of conforming strictly to the rules of law or custom as to

the minimum amount of annual work; in default, the claim becomes forfeited without any authoritative declaration, and any other person may locate it. The minimum amount of work required to be done is fixed by the laws of the State or the customs of the district in which the lands are situate, subject to the provisions of section 2324 of the Federal Law, by which the minimum amount of labour expended or improvement made on each claim in the course of every year should not be of less value than \$100.

A distinction between the system of acquiring mineral land and agricultural land is that in the case of the former the survey is made by the United States deputy mineral land surveyor at the expense of the applicant, covers only the claim applied for, and need not be connected or "tied" to the general system of land surveys; whereas agricultural land is only conveyed by the Government after the section and township lines have been run, and then only according to these boundaries—nothing less than 40 acres in a piece—the square mile (640 acres) being divided, by lines N and S and E and W, into sections of 160 acres each, and these into quarter sections of 40 acres.

Under section 2337, the owner of mineral lands can, at the time of obtaining his patent for such lands, have included **Easements** in his patent non-mineral land used or occupied by him for mining or milling purposes, but the extent of such **of way, water, &c.,** non-mineral land included in the patent is not to exceed **on public lands.** five acres, and payment must be made at the same rate as for the mineral land.

Under section 2338, in the absence of necessary legislation by Congress, the local Legislature of any State or territory may, as a condition of sale, provide rules for working mines involving easements, drainage, and other necessary means to their complete development: and it is provided that such conditions shall be fully expressed in the patent. The conditions referred to are the ordinary police regulations providing for safety, and in some cases determining the manner in which the cost of mine-drainage shall be assessed upon the mines benefited, &c.

The miners of each mining district may make regulations **Inspection** not in conflict with the laws of the United States or **and regula-** of the State or territory in which the district is **-tion of mines** situate governing the location, manner of recording, **on public** amount of work necessary to hold possession of a **lands.** mining location, subject to certain requirements (inter alia) that on each future location not less than \$100 worth of labour shall be performed or improvements made in each year (s. 2324).

All the business connected with the public land is managed

by a special administration of the Federal Government called "The General Land Office," at Washington, directed by a Commissioner under the authority of the Minister of the Interior. The work of the Land Office is divided into two branches, that of *surveys* and that of *sale*. For the *surveys* there is in each State a Surveyor-General, who has under him a staff of Deputy-Surveyors. For the other branch of the work the country is divided into districts having each a *Registrar*, who is the administrative agent, and a *Receiver*, who deals with the funds. The Statute (s. 2334) provides that the Surveyor-General is to appoint surveyors in each land district containing mineral lands, and provides for the cost of surveys and of publication of notices, to be paid by the applicants, and empowers the Commissioner of the General Land Office to establish the maximum charges for such surveys and publications.

Adverse claims are (under s. 2326) to be determined by proceedings in a court of competent jurisdiction.

The decisions of the Commissioner of the General Land Office are subject to appeal to the Secretary of the Interior, and from the latter to the Courts, the final tribunal being the United States Supreme Court.

The Federal Law authorises the same person to occupy an indefinite number of claims even adjoining one another, unless there is something to the contrary in the law of the particular State or in the custom of the district in which the claims are situate; and even these, it appears, cannot prevent the acquisition of any number of claims by individuals through purchase. Each claim, however, must be the subject of a separate application and patent; and it is said that the principal difficulty arising from the Federal Mining Law is that it divides the mineral lands into ownerships so small as to make it a very expensive matter to get together an area large enough for really extensive and permanent mining improvements.

It is understood that numerous law-suits formerly arose about the boundaries of claims, but that they now seldom arise on that account, as the boundaries of claims are officially determined and permanently marked.

The principal source of law-suits under the existing law is said to be the uncertainty attaching to the apex-right or extra-lateral right of the apex-owner. When a miner has worked through his own ground, and is found extracting ore from beneath the surface owned by another, he is of course liable for trespass unless he can clearly show that he has followed all the way a vein upon which he has a valid extra-lateral right.

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Proof of this is sometimes difficult. Expert evidence is required to establish the existence and continuity of the alleged lode. The regularity and validity of the lode-location may be attacked, &c.

The Federal Law has, however, distinctly provided for two cases which might otherwise be the subject of frequent dispute.

In the first of these cases, namely, where veins intersect, it is provided (s. 2336) that priority of title shall govern—that is, the owner of the claim whose title is the earliest in date has a right to all the mineral at the point of intersection, but the other is to have a right of way through the space of intersection for the convenient working of his mine. In the other case, namely, where two or more veins unite, it is also provided (s. 2336) that priority of title shall govern—that is, the owner of the claim whose title is the earliest in date takes the whole vein below the point of union, including the space of intersection.

Although the statute law seems to leave a great deal to be decided by *custom* (see ss. 2319 and 2320), it is stated that litigation over mining “customs” has now about ceased. The customs themselves have been superseded by local legislation in the States, as well as by the provisions of the Federal Statutes.

It may be observed that when once agreements are entered into in America there can be no interference with them by any State legislation, it being a fundamental law (laid down in the Constitution of the United States) that no State shall “make any *ex post facto* law or laws impairing the obligation of contracts.” It is also to be noted that the Federal Law as to public mineral lands hereinbefore referred to does not in any manner affect rights previously acquired. Indeed the law specifically provides (s. 2340) that nothing which it contains shall be construed to impair in any way rights or interests in mining property acquired under existing laws; and, as regards *water rights*, it expressly declares (ss. 2339 and 2340) that wherever, by priority of possession, rights to the use of water for mining, agricultural, manufacturing, or other purposes have vested and accrued, the same are to be recognised and the owners protected; and the right of way for the construction of ditches and canals for the purposes specified is to be acknowledged and confirmed; although, if the person constructing any ditch or canal injures or damages the possession of any settler on the public domain, he is to be liable to the party injured for such injury or damage; and all patents granted, or pre-emption or homesteads allowed, are to be subject to any such vested and accrued water-rights, or rights to ditches and reservoirs used in connection therewith, as aforesaid; finally, the law declares (s. 2352) that nothing which it contains

is to destroy or impair any rights which might have attached previously to the passing of the law.

II. AS TO PRIVATE LANDS.

The moment a valid mining claim is located on the Federal public land, that moment the land ceases to be public, and is, as the Courts have declared, "withdrawn from the public domain."

It may be laid down as a general proposition *that the owners of mines, whether patentees, or grantees from patentees, or proprietors of the fee by any other chain of title, or States, can do what they like with their property.* Even titles to patents may be transferred to any person whatever (s. 2326); consequently any private individual or company having acquired mineral lands can sell them, or lease them, or otherwise dispose of them at pleasure. Private lands (comprising in this term the bulk, if not the whole, of the lands in the Eastern States) are consequently free from the scope of the Federal legislation, and are left to be dealt with on the basis of absolute freedom of contract.

The holder of a patent is exactly in the position of the owner of real estate in fee simple by an ordinary deed, except that the patent is a clearer title, more easily searched and free from many collateral uncertainties.

Mines are accordingly dealt with in the United States in the same manner as in England, except that the rents or royalties **dealt with** served are frequently much higher. This is sufficiently **with mines.** shown by the evidence given by Sir Lowthian Bell before the Royal Commission on the Depression of Trade and Industry in 1885. In the statement put in by him and set out in the Appendix to the Second Report of that Commission (App. A., Part I.), he makes the following observations (p. 339):

"I met with many similar instances in the United States. The mines on Lake Superior are rich in them. Skilled geologists, with energetic minds, pushed on into this then unknown region—indeed, so little known at the present day that I found the native Indians still living in its vast tracts of unclaimed land. One enterprising speculator purchased from the State a property of 40 acres for a few thousand dollars. By him it was agreed to be let to a second, who agreed to pay a royalty of 2s. per ton on the ore to the original purchaser; and the new owner, after an expenditure of £3,000 to £4,000, passed the property on to a third, who paid for the privilege of working the ore, in addition to the royalty of 2s. per ton, the sum of £75,000, leaving thus a profit to the second holder of £71,000 or thereabouts."

The following remarks are also taken from Sir Lowthian

Bell's "Notes of a Visit to the Coal and Iron Mines and Iron Works in the United States" (2nd Edition, published in 1875):

As to Anthracite Mines (in Pennsylvania), p. 13—

"A coal speculator who was fortunate and sagacious enough in the early career of this important branch of mining industry to purchase coal lands, pays as interest little, often nothing, in the way of royalty. A lessee of coal afterwards paid about 1s. per ton, but this in recent years has risen to 2s., or even as high as 2s. 3d."

As to Bituminous Coal, p. 14—

"The royalty paid varies from 11d. to 1s. 4d."

Kanawba Valley (Ohio and Chesapeake Railway), p. 15—

"The royalty given me was low, viz., about 6d. per ton; but any one wishing to invest money in coal lands on the banks of the Kanawba may do much better than this, for they can be purchased at something under £1 an acre, although, when immediately adjoining the railway, as much as £5 an acre is obtained."

Magnetic Iron-ore (in the State of New Jersey, Hibernia Mine), p. 23—

"The royalty paid is nearly 3s. per ton, and probably in any new lease it would be even higher."

(In the State of Pennsylvania, Cornwall Mine) p. 24—

"The mine, or quarry rather, is private property, hence there is no royalty to be paid. It was stated to me that as much as two millions sterling had been offered for this mine . . . but it was declined."

Limonite or Brown Hematite (in the State of Pennsylvania), p. 28—

"The landowners, usually small farmers, receive a royalty varying from 1s. 10d. to 2s. 10d. per ton."

The mines in private lands appear to be dealt with in much the same manner as in England, the royalties varying according to:—1st. Proximity to market. 2nd. Quality of mineral (*e.g.*, anthracite may be worth 2s. or 2s. 6d. per ton royalty,¹ whilst bituminous coal has at present little or no royalty value). 3rd. Cost of working. It is usual to reserve royalty² by way of a

¹ The royalty upon anthracite is calculated upon the coal sent to market (after large waste in mining, crushing, screening, and sizing), and varies usually with the class or size of coal. A probably fair average on the whole tonnage is one shilling.

² For further particulars as to dealings with mines in the United States, see the evidence given by Dr. R. W. Raymond to the Mining Royalties Commission, and the answers to questions put to certain representative gentlemen in the States, printed in the Appendix to the 4th Report of the same Commission.

proportionate part of the selling price, a minimum being fixed and the royalty ascending by scale in proportion to the increase in selling price. There are various ways of ascertaining the basis: in some cases the selling price at the works is taken; in other cases, and more frequently, the price at New York Harbour, which is unquestionable, is taken.¹ On iron-ore, the royalty varies from 15 cents. to 75 cents., or even \$1.00 per ton. The latter prices are more rare, and the average is probably less than 50 cents.

It is also usual to provide for regular payment and working, either by a fixed certain rent, with power to recoup, as is usual in England, or by requiring a certain amount of tons to be paid for every year.

A form of lease, stated to be the ordinary form, is given in the Blue-Book before referred to, p. 45.

The writer, when visiting some oil wells and natural gas wells in the neighbourhood of Pittsburg, with the members of the British Iron and Steel Institute, in the autumn of 1890, was informed by an American gentleman interested in one of the properties on which the wells were sunk that the royalty paid to the owner of the land in respect of the oil wells was usually 5 per cent. of the produce when the rent was fixed before the oil was found; but that in his case the rent was not fixed until after the oil was found, and was then fixed at the rate of 10 per cent. of the produce; and that in the case of the natural gas wells the rent was usually a fixed annual royalty of 400 dollars or 500 dollars.

As regards payment of taxes, this is also a matter of agreement, and it is sometimes arranged that the tenant should pay all, sometimes that the landlord and tenant should contribute in equal shares, and sometimes that the landlord should pay all.

It is stated that all the British Companies operating mines in the Pacific States and territories have purchased patented lands.

In the notes handed in by the writer to the Royal Commission on Mining Royalties, a list is given of British Mining Companies which had been formed for the purpose of working mines in the United States of America, containing particulars (taken from a publication² in England) in many cases of the

¹ This statement of the basis of calculation applies almost exclusively to anthracite. The cases in which the selling price is taken into account as determining directly a variable royalty on any other mineral product are extremely rare. It is, however, common in gold and silver mines for lessees to pay as royalty a certain percentage of gross or of net returns, which, of course, would depend indirectly upon the selling price of the product.

² "Burdett's Official Intelligence."

sums paid for the purchase of such mines; it does not, however, appear to him that these particulars, though of importance with reference to the questions which had to be considered by the Royal Commission, could be of much general interest or value except perhaps as illustrating what a terrible mortality has taken place amongst such companies, nearly a third of which have already disappeared since the list was compiled in 1890; he has therefore omitted the list here.

That a private owner can, at will, alienate his property in minerals while continuing to hold the fee of the soil is as unquestionable in the United States of America as it is in England. A State can, of course, do the same, but as a rule it does not. The almost or quite universal practice is to sell the land outright with everything in it.

Separation
of minerals
from sur-
face.

Wayleaves on private lands are usually a matter of agreement, but in Pennsylvania there is one exception to this rule, viz., that under the Mines Regulation Act, in case it is absolutely necessary *for the purpose of ventilation or drainage only*, one owner may ventilate or drain through another owner's property, making compensation, to be ascertained, in case of difference, by a jury. In the State of Massachusetts also there is a special law (*see* Public Statutes of Massachusetts, ch. 189, ss. 19 to 28) under which owners of mines or mineral deposits and of low lands, swamps, &c., which on account of adjacent lands belonging to other persons, or occupied as highways, cannot be approached, worked, drained or used in the ordinary manner without crossing such lands or highways, may be authorised to establish roads, drains, ditches, tunnels and railways to such places in the manner thereby provided. The parties desiring to make such improvements must apply to a certain body known as the County Commissioners, giving security for the costs of the application, and the Commissioners, after inquiring into the circumstances, and hearing all parties, may, if they consider it necessary, proceed to lay out and establish the improvements in such a way as shall do as little injury as is practicable, and shall ascertain the damage which, in their opinion, the proprietor of the adjacent lands will sustain, and shall apportion the damage equitably among all parties to be benefited, having regard to the benefit each will receive. Where repairs afterwards become necessary, a majority of the persons benefited may cause such repairs to be made, and may compel contributions on the basis of the award from each person benefited; any person aggrieved may appeal to a jury. If the improvements are situate in a town the application is to be dealt

with by the Town Authorities, with power of appeal to the County Commissioners.

It is understood that Railroad Acts for the establishment of public railways can also be obtained in most of the States without much trouble or expense.

The State of Pennsylvania possesses special laws for inspection and regulation of coal mines, there being separate regulations with respect to the anthracite and the bituminous mines respectively. These laws naturally have regard to the health and safety of the persons engaged in the mines. With this view they lay down certain rules as to keeping plans, double communication between the mine and the surface, ventilation, safety lamps, &c. A staff of inspectors is provided to see to the observance of the law and prosecute offenders. The Courts have power under certain circumstances to stop the workings. Persons who have sustained injury through a contravention of the law are entitled to recover damages from the offender, and penalties are prescribed for breaches of the law, either by masters or workmen. In fact, the provisions are very similar to those of the English Coal Mines Regulation Acts, but do not provide for "Special Rules."

Similar laws for the regulation of coal mines exist in the State of Illinois; also in other States where coal is mined, such as Ohio, Alabama, Virginia, &c.

In some parts of the country (as the result of private purchases), the mineral lands have got into a few hands; for instance, in the State of Pennsylvania about 70 per cent. of the anthracite coal fields appear to be owned by *ten* large corporations. (See "Mineral Resources of the United States," published in 1883, p. 25.) It is said that the Philadelphia and Reading Coal and Iron Company bought for \$30,000,000 or thereabouts 80,000 acres of anthracite coal land, and issued bonds for the amount which were guaranteed by the Philadelphia and Reading Railroad Company. In West Virginia, again, it is said that coal lands are generally held in large grants and often under conflicting titles, and we are told that many of the tracts to which a clear title could be found are so involved by mortgages, that they can only be taken as a whole by large capitalists, and cannot be divided to suit the requirements of individual operators. The river bottoms and lower slopes are said to be often held under different titles by small farmers who control the approach to the coal lands in their rear. (See "Mineral Resources of United States" published in 1885.)

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III.—GENERALLY.

Working men's relief or insurance societies are voluntary.

Relief Societies, &c. There is no State legislation on the subject. In many cases the employer and employed voluntarily unite to provide for the disability of the workman, as in the case of the Lehigh Coal and Navigation Company, where the beneficial fund is created and maintained by the following contributions made monthly, viz.: the Company to pay to it one cent for every ton of coals produced at the mines; the inside workmen employed on the property pay to it one per cent., and the outside workmen one-half per cent. of their earnings, but no one has to pay more than one dollar a month. Provision is thus made for the contributors and their families in case of accidents occurring in the service of the Company.

Import duties. The following extracts from the New Tariff Law of 1890 may be found useful in considering this subject:

The Law provides as follows:—

“That on and after the 6th day of October, 1890, unless otherwise specially provided for in this Act, there shall be levied, collected, and paid upon all articles imported from foreign countries, and mentioned in the schedules herein contained, the rates of duties which are by the schedules and paragraphs respectively prescribed,” viz. (inter alia)—

SCHEDULE C.—METALS.

Iron Ore, including manganiferous iron ore, also the dross or residuum on burnt pyrites, 75 cents per ton = 3s. 1d. per ton.

Iron in pigs, &c., three-tenths of one cent per lb. = £1. 7s. 8d. per ton.

Bar iron rolled or hammered, comprising flats not less than one inch wide, nor less than three-eighths of one inch thick, eight-tenths of one cent per lb. = £3. 13s. 10d. per ton.

Railway bars made of iron or steel, and railway bars made in part of steel, T rails and punched iron or steel flat rails, six-tenths of one cent per lb. = £2. 15s. 5d. per ton.

Bar iron, various rates according to classes.

Boiler plates ditto, up to 45 per cent. ad val.

Steel plates, 25 per cent. ad val.

Copper imported in the form of ores, $\frac{1}{2}$ cent on each lb. = £2. 6s. 2d. per ton of fine copper contained therein.

Rolled plates, 35 per cent. ad val.

Lead Ore and lead dross, $1\frac{1}{2}$ cents per lb. = £6. 18s. 6d. per ton.

Pigs and bars, per lb. 2 cents = £9. 4s. 8d. per ton.

Antimony, as regulus or metal, ten per cent. ad val.

Metallic mineral substances in a crude state, and metals unwrought not specially provided for, 20 per cent. ad val.

Manufactured articles or wares not specially enumerated or provided for, composed wholly or in part of iron, steel, lead, copper, nickel, pewter, zinc, gold, silver, platinum or any other metal, and whether partly or wholly manufactured, 45 per cent. ad val.

SCHEDULE N.—SUNDRIES.

Coal slack or culm, such as will pass through a half-inch screen, 80 cents per ton of 28 bushels, 80 lbs. to the bushel=1s. 3d. per ton.

Coal, bituminous and shale, 75 cents per ton of 28 bushels, 80 lbs. to the bushel=3s. 1d. per ton.

Coke, 20 per cent. ad val.

CHAPTER XVII.

SPANISH AMERICA.

NOTES ON MINING LAW.

UNDER the head of "Spanish America" it is here proposed to group the mining laws of Mexico and of the different States of Central and South America, all of which (with the exception of some of the islands of the West Indies and some parts of Guiana) were for a period of close upon three centuries, terminating early in the present century, under the domination of either Spain or Portugal, and which have naturally followed in their legislation the legal principles then adopted in the last-mentioned countries; though, somewhat curiously, the converse is equally correct, viz., that the laws of Spanish America have been to some extent the basis of the modern mining legislation of Spain, seeing that the Spanish law of 1825 was undoubtedly inspired by the celebrated *Ordinances of Mexico*, which at that time governed the greater part of Spanish America. The last-mentioned Ordinances were, however, no doubt adapted from the old Spanish mining law of 1584, and even in these days, when no longer under the domination of Spain, it seems to be the tendency of legislation in Spanish America to follow the legislation of Spain.

The frequent changes of legislation on the subject of mining which have taken place during recent years in most of the Spanish-American States have in nearly every case resulted in the abrogation of the chief features of the Mexican Ordinances, by throwing the ownership and working of mines open to foreigners and doing away with the system of denunciation by reason of abandonment, and by permitting anyone, as now in Spain, to acquire mining property free from labour conditions and from risk of forfeiture except on account of the non-payment of a small royalty tax. The desirability of such legislation in a

country where magnificent mineral wealth has long lain dormant under a system of exclusiveness and insecurity seems unquestionable, and it can hardly be doubted that the mining industry in the Spanish-American States will be encouraged through the effect of this recent beneficial legislation. There are, however, still some notable differences between the principles imported into the respective mining laws or codes of the various Spanish-American States, as, for instance, with respect to the classification of coal and other combustible substances, which in Mexico and Chile are held to belong to the owner of the soil, although in the former, but not in the latter, State he must obtain a concession before working them, whilst in most of the other States such substances are held to be the property of and concessible by the State.

In the preparation of the following notes free use has been made of the translations of the different mining codes and laws contained in "Mining Laws of Latin America,"¹ published by the Bureau of the American Republics in 1892, in which work translations of most of the laws are to be found *in extenso*, to which the reader who may require further details is referred.

In order to avoid tiresome repetition, it has been here considered sufficient to refer in some detail to the mining laws of what may be termed the parent country, *Mexico*, and to set out the special features of the laws of the other Spanish-American States according to alphabetical order, so far only as such laws clearly differ from the ancient or modern laws of Mexico, on which they are all more or less based.

MEXICO.

As to the mineral resources of Mexico, it would almost be sufficient here to say that in recent times over half the silver produced in the whole world has been supplied by Mexico; that copper, frequently associated with gold, is found in various parts of the country; that iron-ore occurs in enormous masses, and that mines of lead, salt, coal, and mercury are worked (Enc. Brit. tit. Mines). It may, however, be also mentioned that, although the principal mineral product of Mexico for many years has been silver, there has of late years, owing to the depreciation of silver, been an effort made to develop the other mineral resources of the country, with the result that extensive workings of gold, copper,

¹ The term "Latin America" is perhaps more strictly applicable than the term "Spanish America," but the latter term seems more clearly to indicate what is undoubtedly the common bond between the mining legislation of the several States.

MEXICO—continued.

lead, mercury, salt, iron, coal, and many other metals and minerals have been opened. Silver and gold, however, still continue to be the chief mineral products, and form 70 per cent. of the exports. Even yet it may be said that, owing to a variety of causes, the mineral resources of the country have not been fully developed.

The celebrated "Ordinances of Mexico" (promulgated in 1783 under Royal decree of the Spanish Government) seem to have been, in some respects at least, a codification of the ancient mining customs by which the mines in Mexico had been governed from the time of the Aztecs, and which continued to be followed during the time of the Spanish occupation; but after the establishment of Mexican independence, the governing authority in mining matters, which had previously, under the direction of the Viceroy, exercised supreme command in mining matters all over the country, was suppressed, and its functions were delegated to special mining authorities in each State, which led to a notable and undesirable diversity of legislation on the subject of mines in different parts of the country. In consequence of this objectionable result, the States agreed in 1883 to an amendment of the Constitution, by virtue of which the right to legislate in mining matters was conferred on the Federal Government. Subsequently a Commission was appointed to prepare the project of a mining code, which was shortly afterwards carried into effect, and became the law for the whole Republic by a decree of the President, dated November 22, 1884. This decree was afterwards supplemented by a second decree dated November 28, 1884, and two later decrees, both dated June 6, 1887; but by the recent law, which came into force on July 1, 1892, the mining code of 1884 and all subsequent circulars and provisions on the subject were repealed.

The chief characteristics of the Ordinances of Mexico had been the establishment of the Tribunal General of Mines sitting at Mexico, and constituting the principal authority, and of Deputies of Mines, forming subordinate authorities in the different mining districts, the prohibition of strangers who had not been naturalised from acquiring mines, and the somewhat indefinite nature of the classification of substances to which the mining code was applicable. The Ordinances followed the Spanish law in adopting the system of the *pertenencia* as the measure of a mine, but with certain unimportant distinctions which it is not now worth while to indicate, and certain advantages were given to the discoverers of minerals over other applicants. It was obligatory to employ four men at least in each mine without cessation for a period of

MEXICO—*continued*.

four consecutive months under risk of "denunciation,"¹ as in the old Spanish law (see *ante*, p. 129). The miner had the right to work all substances separate from the ownership of the soil within the area of his *pertenencia* on making compensation for the actual value of surface necessarily occupied. The work in the mine was subject to the inspection of mining deputies. The law also contained certain special features with respect to the formation of companies (taken to be divided into twenty-four equal shares, called "barras") and with respect to the contract of "avios" or loan on mines, directed to ensure the permanent continuance of working in the mines. These Royal Ordinances of Mexico assume such a prominent position in the history of the mining legislation of Spanish America that it may not be considered superfluous to refer to them here in further detail. The Royal Ordinances were in fact divided into nineteen titles, the general effect of which was as follows:—

Title I. provided for the establishment of a Royal Court of Mines sitting at the capital, and for the appointment of Deputies of Mines, forming subordinate authorities in the different mining districts. The functions of the deputies, who were elected annually by the miners of the different districts, were regulated by Titles II. to IV. of the Ordinances. Title V. provided that the King (afterwards the Republic) was the owner of all the mines, but that mines might be granted to individuals and companies upon certain conditions, including the payment to the Treasury of such a share of the yield as might be established by law, and the working of the mines in strict accordance with the provisions of the Ordinances.

Titles VI. and VII. related to the acquirement of mines on the ground of discovery or by denunciation, and to the persons who were allowed or forbidden to acquire or work mines. Under section 1 of Title VII., aliens, not naturalised or domiciled in the country, could not acquire the ownership of mines. By section 2 members of the religious orders, and by section 3 the mining officials, were forbidden to acquire or work mines.

Title IX. provided for the preservation and safety of the mines and miners, and laid down rules as to when a mine had been abandoned and became again liable to denunciation.

¹ "To *denounce*, in the Mining Code of Mexico, means that proceeding by which a legal right of possession is obtained to a particular portion of any vein worked or unworked, known or unknown, which a miner chooses to select for his operations. This word has no equivalent in English, but is used in its Anglicised form by all English-speaking foreigners who are in the mining business in Mexico." (Trans. from the Mining Code of Mexico by Richard E. Chism.)

MEXICO—*continued.*

Title X. provided for drainage of mines.

Title XI. provided for the organisation of mining companies.

Title XII. regulated the relations between masters and workmen in mines and their respective duties.

Title XIII. referred to the supply of water to mines and of provisions for workmen.

Title XIV. regulated the subject of persons engaged in the reduction of ores for other persons and of the purchasers of metals.

Titles XV. and XVI. related to the aviadores, or persons supplying mines with money, and the dealers in gold and silver, &c.

Title XVII. related to surveys of mines.

Title XVIII. related to the mining education of young people.

Title XIX. referred to the privileges granted to mines and miners calculated to encourage and promote the mining industry.

Whilst retaining some of the special features of the old Ordinances of Mexico, the modern mining law of Mexico has been designed to encourage the development of the mining industry of the country, by throwing it open to all comers and affording security and relief from burdens to the owners of mines ; but, as in all other countries in which new systems of mining legislation have been adopted, alterations in the Mexican mining law are constantly taking place, and it may be reasonably doubted whether the law can even yet be considered to have got into a permanently settled condition.

The new law of 1892 unmistakably follows the modern Spanish legislation by abrogating the system of "denunciation" and permitting the acquirement by individuals or associations of any number of mines to be held in perpetuity free from any labour conditions or other conditions, except the payment of a comparatively small fixed tax to the Federal Government, the non-payment of which can alone cause a forfeiture of the mine. The form of the new law is much more concise and general than that of the law of 1884, being directed rather to the enunciation of general principles than to an attempt to deal in detail with every possible circumstance to which it might become applicable, as seems to have been the object of the framers of the code of 1884. The latter code, though now abrogated as regards future concessions, is still of importance, not only as being applicable to some extent to the concessions which had been granted, or to contracts which had been entered into by the department of

MEXICO—*continued.*

Fomento under it (see Art. 3, Tit. V. of the law of 1892), and to other contracts entered into under it (see Art. 5 of ditto), but also because it illustrates the special features of the Mexican mining legislation, which will no doubt be followed out to a great extent in the practical interpretation of the new law; and also because it has to a considerable extent been used as the basis or type upon which many of the new codes which have been adopted in various countries of Spanish America have been framed.

The law as to taxation of minerals has varied considerably in Mexico even in recent years. By the code of 1884 it was declared (Art. 196) that for the term of 50 years from the date of that law all mines of mineral coal of every kind, of iron, and of quicksilver, and the products of the mines were to be exempt from all direct taxes, and other mines (Art. 199) were only to pay a single direct tax, which was to be levied on the value of the substance worked without deduction for expenses and not to exceed two per cent. of such value. A later law of the 6th of June, 1887, contained provisions still more favourable to the workers of mines; but, as will be seen hereafter, the law now in force imposes a federal tax on all mining property, except such as under concessions previously granted had been expressly exempted from a taxation during such time only as such exemption should last.

Although the mining code of 1884 has been superseded by the existing law, after what has already been said about that code it may still be considered desirable to refer in detail to some of the principal provisions of the now rescinded code.

The Mexican Mining Code of 1884. The classification of mineral substances with respect to rules as to ownership, though much less specific under the law of 1884 than under the existing law, is not sufficiently distinct from the classification under the latter law to necessitate that it should be here set out in detail, and it will suffice to say that under the law of 1884, all mines, placers, and deposits of metals, and also all metallurgical works and sites for their erection, and also water extracted from mines and used in mines and metallurgical works, formed the subject of *concession*, and might be acquired by virtue of discovery and denunciation from the proper authorities by all persons, either native or foreign, who submitted to the prescriptions of the law, whilst deposits of the various varieties of mineral coal, rocks in place and materials of the soil, such as limestone, slates, &c., certain substances of mines which might be found in placers and salts found on the surface, pure or salt waters, either superficial

MEXICO—*continued*.

or subterranean, petroleum and outlets of gas or of warm or medicinal waters, were left to the exclusive ownership of the owner of the soil without necessity for denunciation or for special adjudication (Art. 10), but subject to inspection and regulation of workings (Art. 11).

The mine-owner might occupy any surface land either within or without the area of his claim in order to open mine entrances, establish workshops, roads, drains, aqueducts, or other constructions by consent of the Mining Deputy when the ground was without an owner, but if the land was either public or private property, he had first to pay the value of the area which he might occupy and the direct damage which might follow to the proprietor according to a valuation to be made by experts, who were to be appointed one by each party and the third, in case of disagreement, by the Mining Deputy (Arts. 12, 15, and 95).

Every inhabitant of the Republic—whether native or foreign—might search in public lands at his free will, or in private lands with the consent of the owner or of the executive authority of the place, subject to the limitations and requirements of the law as to the discovery of mines and deposits forming the subject of denunciation (Arts. 30–41). The permit was not to extend beyond one month (unless renewed for one month more), and unless the search was made by drills; neither the depth of the excavations nor the diameter of the prospect holes was to exceed five metres (Arts. 31–5).

Whenever a permit was granted to explore for mines, a report had to be made to the Ministry of the location so conceded, of the extent thereof, who were the explorers, when the exploration was to commence and when terminate, and also of the result of the exploration (Circular of the Min. of Pub. Works, July 23, 1887). The permit might be extended once only, and for one month only, by virtue of a new decree. The person making the search had during the term of his permit or within a month from its expiration the preference to obtain the ownership of the mine, by making the formal denunciation, but on the expiration of those periods he lost such right. He could not explore within a dwelling-house or its dependencies, such as gardens, orchards, &c., or at a distance of less than 30 metres from its outside walls without the consent of the owner, from whose refusal there was no appeal, nor could he make searches in the streets or public squares of towns, nor outside such places, at less than 30 metres distance from the exterior lines of roads or canals or of any other structure (Arts. 36–41).

MEXICO—*continued.*

Any person whatever might obtain a concession by adjudication and by virtue of a denunciation, which might be made either in respect of a discovery, or of an abandonment, or of the lapse or extinction of the rights of a former owner for contravention of the law (Art. 43). The discoverer of a new mineral district had a right to a concession comprising three mineral claims following each other on the principal vein or deposit, and to one more claim on each of the veins or deposits which he might also have discovered. The discoverer of a new deposit in a mineral district already known had a right to two successive claims, whilst the discoverer of a new mine in a known deposit in a known mineral district had a right to one claim only (Arts. 42-5). Discoverers of placers, beds, or layers had a right to three claims; subsequent comers on the same vein only obtained one claim (Art. 48). In concessions upon veins the claim was to be a rectangle of which two sides, parallel to the strike of the vein, were to be 200 metres long on the level. The other two sides varied according to the dip of the vein from 100 to 300 metres. Other claims on beds and placers varied in size accordingly as the deposit was of gold, iron, or other substances (Arts. 97-105). The angles of the rectangle of the concession were to be marked by solidly constructed landmarks, distinctive by their form or by some sign from those of neighbouring owners, and to be kept in repair by the mine-owner (Arts. 108-9). The restorers of abandoned mines had the same rights as discoverers (Art. 47), and a mine was to be considered abandoned, and might be awarded to whoever might denounce it, if it should not have been worked by six miners employed underground for a period of 26 weeks, unless for sufficient cause the owners obtained leave from the Mining Deputy to suspend working (Arts. 50-4). The ownership of any mine was also liable to forfeiture and might be awarded to anyone who should denounce the same if it became ruinous or was badly ventilated or drained (Arts. 59-60).

A denunciation was in all cases to be made by means of a writing, presented in duplicate to the Mining Deputy of the district, and expressing under what title it was made, the name of the person making it, and the names of his partners if he should have any, the place of his birth, his profession or trade and residence, and the special features of the deposit, mine, or site as denounced; if the denunciation was made for abandonment or forfeiture of title, the writing was also to contain the name of the last possessor if known, his domicile, the name of the mine, its location and distinctive signs (Arts. 61-2). The denunciation was to be published for the three following Sundays by placards and

MEXICO—*continued.*

by the official newspaper, so as to give notice to anyone who thought he had a right to oppose it. The person making the denunciation was also, within four months from the date of making it, to have a working opened at the place of the denunciation in which an expert could recognise the peculiarities of the deposit, as well as its strike and dip; and, if the owner of the soil required it, the value of the land occupied, and the damages which might be occasioned were to be paid over under the superintendence of the mining authority before possession was taken (Art. 65). When the workings were open, and without waiting for the completion of the four months from the date of the denunciation, provided the term of the publication was past, an expert was appointed to measure and mark the boundaries of the mine, and to prepare a report and plan, upon which the Deputy of Mines decreed the adjudication in favour of the person making the denunciation (Art. 66), and ten days afterwards possession was formally given to him (67). Possession might be taken by an agent appointed by letter (Art. 68). This differed from the case of the act of denunciation, which could only be made in the name of another by virtue of a legal power of attorney (Circular of the Minister of Public Works, December 16, 1886). In cases of denunciation for abandonment the publication was not to be commenced until the last previous possessor, if known, had been summoned and an opportunity given to him of opposing the denunciation, and in cases of controversy between two or more persons who might claim to have discovered a mine, the person who had registered his denunciation first was to be held as the discoverer (Arts. 71-5). In cases of opposition, if the intervention of the Mining Deputy did not put an end to the question it was to be remitted to the judicial tribunals (Art. 80). The employees and workmen of a mine were prohibited from denouncing other mines within a distance of 800 metres from such mine without the consent of the owner of such mine (Art. 72). A *demasia*, or space between mines in which there was not room to form a new claim, might be awarded to one of the adjoining mine-owners, who should have denounced it, or divided between the claims which it separated (Art. 111). If a mine-owner had so far advanced in his underground workings as to have passed out of the limits of his claim either along the vein or transversely, he might continue his working whenever he was in *free* ground, and might acquire the same by denunciation, provided that no concession should exceed double the measurement first granted (Art. 114), and when a mine-owner arrived at the boundary of his claim with any working that was yielding ores or products, he might continue onward even in another

MEXICO—*continued.*

claim; being, however, obliged to give immediate notice to the Mining Deputy and to the owner of the claim, and thenceforward to divide with the latter the produce and the costs of the working, if such working was profitable, under penalty in case he should not have given the notice of paying the value of all the produce, without deduction of cost, to the owner of the adjoining mine (Art. 117).

The mining property acquired according to the Mexican Mining Code of 1884 could be transferred freely, like any other real property, so long as the parties subjected themselves to the provisions of the law relating to mines (Art. 6). There was no provision against the acquisition of concessions by strangers, and numerous English companies have been formed to purchase and work mines held under concessions in Mexico. As an illustration of the mode in which mining concessions have been there dealt with the undertaking of "The United Mexican Mining Company, Limited," may be referred to: "This company is interested in the San Cayetano, El Cubo, and Santa Cecilia properties, in the State of Guanajuato, Mexico. The San Cayetano property, which consists of twenty mines covering 770 acres, is worked by a partnership in which the United Mexican Mining Company holds 20·2693375 out of 24 shares. The El Cubo property, the freehold of which the company has now acquired, consists of eleven mines of an area of about 400 acres. The mines of Santa Cecilia were leased in March 1888, the terms being that the company should pay \$5,200 for three-fourths of the rights, leaving to the lessors one-fourth share in the profits. This share was subsequently purchased for \$11,000."—(Burdett's Official Intelligence, 1893.)

Title VIII. of the Mining Code of 1884 provided for the formation of mining companies which were to be governed by the provisions of the Federal Code except so far as such provisions were modified by the special provisions of the Mining Code. The special provisions required that the mine held by a company, whether made up of one or more claims, should be considered as indivisible, and to be worked in common, and the costs and products were to be divided according to agreement, or, in the absence of agreement, proportionably to the stock held by each person; that each company formed for working might acquire by denouncement four continuous claims on the same vein or deposit; that each company should be constituted by a recorded contract containing the name and domicile of each of the partners, and the stock represented by each; that the mine should be considered as divided into shares, each partner having a right to one or several of such shares according to

MEXICO—*continued.*

agreement; that the death of a partner should not dissolve the company, his shares descending to his heirs; that shares might be transferred, and were to be considered as moveables (personal property) for all legal purposes, with a variety of other provisions regulating the constitution and management of companies, but which were only applicable in the absence of an agreement (Arts. 151-74).

In connection with the subject of mining companies, the special provisions of the Mining Code of 1884 relative to the contract of habilitation or "avio" may be here referred to. "The contract for habilitation or 'avio' is one by which any party binds himself to furnish provisions or money for working a mine. The habilitator or 'aviador' is the person who furnishes such aid to the mine. 'Barras aviadas' are shares in any mine that pay no assessments, though they have their proportionate share of the profits; such shares are often called 'barras viudas.' The shares that pay assessments are often called 'barras aviadoras.' A *barra* is always the one twenty-fourth part of a mine. When the latter is divided into lesser fractions, such shares are called 'acciones,' which may be 'aviadas' or 'aviadoras' as above."—(Translation by Mr. R. E. Chism). The essential feature of this contract of "avio" was that the person undertaking to provide for the necessary expenses of the working of a mine acquired the right of reimbursing himself from the products of the mine by way of preference over all other creditors, except those of workmen for their wages. If there were several *aviadores* the preference was to be given to the last. Under the law of 1884, such contracts had to be publicly registered. If the habilitator failed to advance the sum required for wages at the proper time, the miner might sell any goods or tools available, and the habilitator had to bear any loss which might ensue. The law also provided that in sales or contracts with respect to mines there should not be in any case a right to rescission on account of wrong, nor to the action of integral restitution (two forms of Spanish legal procedure which are said to have formerly constituted traps especially dangerous to foreigners). In other respects the contract of habilitation was to be governed by the agreement of the parties, though, in the absence of special agreement, certain rules were laid down by the Mining Code (Arts. 175-87).

As before observed, a mine was to be considered abandoned and might be awarded to anyone who might denounce it if it had not been worked by six miners employed underground for a period of 26 weeks in any one year (Art. 50).

Forfeiture
of conces-
sions.

MEXICO—*continued.*

The ownership of any mine was also liable to forfeiture, and might be awarded to anyone who might denounce the same—

1. When, from its bad condition, the lives of the workmen should be in peril, or when any material workings should be in a ruinous condition.

2. When through bad ventilation the health of the miners should be injured, or the lighting of the mine should be impeded.

3. When the drainage of the mine should have been suspended for 26 weeks in any one year.

Notice, however, had to be given to the owner of the denounced mine, who was entitled to have a time granted not exceeding six months within which he could remedy the cause of complaint (Art. 59). If, within such time, the cause of complaint had not been removed, the mine was at once to be put into the possession of the denunciator, provided that he had previously given a bond to the satisfaction of the Mining Deputation for the cost of establishing the drainage, or of the work which ought to have been done, and which he had to commence to execute within one month and complete within six months of taking possession, under risk of losing his rights (Arts. 59-60).

Manner of working mines. Title VI. of the code of 1884 contained precise regulations as to the mode of working mines, which had to be properly ventilated and protected in the manner specified by the code; and in order to secure the fulfilment of the regulations, the authorities were directed to exercise proper vigilance by means of Mining Deputies, mining engineers, or of any agents they might find it convenient to employ (Arts. 119-21).

Drainage of mines and tunnels. Title VII. of the code of 1884 also contained specific provisions as to the establishment and maintenance of "adventurer" tunnels, or galleries, either for the drainage or the working of mines. These tunnels might be constructed by mine-owners or others by way of denunciation, and subject to previous approval by the mining administration, and the owners of such tunnels had various rights and advantages, and particularly a right to contribution from the owners of mines, which might be drained or worked by means of the tunnels towards the expense incurred, but no such contribution was payable in respect of *ventilation*.

Mining easements. As before observed, a concessionnaire had the right of occupying with the consent of the administration, not only within, but also outside the area of his concession, all land necessary for the working of his mine, on the sole

MEXICO—*continued.*

condition of paying in advance the value, fixed by experts, of the land occupied, and of the damage which might directly result from such occupation (Art. 95). Works of ventilation, drainage, &c., might be carried on through adjoining mines with the permission of the Mining Deputy, who had to be satisfied that the proposed works ~~would~~ be useful and would not result in damage to the adjoining mine-owner (Art. 115); if during the execution of such works any ore or products of value should be met with, the mine-owner carrying on the work had to give notice to the Deputy and the owner of the adjoining mine, and had to divide with the latter the profits and losses of working such ores and products if the working was profitable until such time as he met with the working in the adjoining mine, after which the mine-owner carrying on the work could only do so for the convenience of his own mine (Art. 116).

Roads opened in any mine might be used by the owners of any other mines in the same mineral district, on payment of a proportion of the cost of maintenance, to be fixed in default of agreement according to the user (Art. 16).

The industry of mining was under the direction of the Ministry of Public Works (Fomento), which was represented in the capital of the Republic by a Corps of Engineers and Miners, and in each mining district by Mining Deputies (Arts. 18–21). The latter were elected for two years (being eligible for re-election at the end of that period) by the miners in the locality, who had been registered on their own application as having been for one year, before the date of the inscription, owners, or *aviadores*, or mining engineers, with residence in the district, or, having been previously inscribed in some other district, had acquired property in the particular district in which they applied to be registered. The election was by ballot. The Mining Deputies themselves had to be inscribed miners and Mexican citizens. The Mining Deputies exercised the governmental and economic functions assigned to them by the code, particularly as to acts of adjudication, protection, and declarations of desertion and forfeiture, and they were assisted by secretaries and graduated experts, and were entitled to receive certain specified fees for the duties which they performed (Tit. II. of Mining Code and Chap. II. of Decree of 28th Nov. 1884).

The Mining Deputies had to see that the conditions of the code and the police regulations relative to the working of mines were fully carried out, and with that view they were obliged to visit or order to be examined whenever they might deem it necessary, and at least once in two years,

MEXICO—*continued*.

every mine in their district, and had to send reports after such visits to the Ministry of Public Works. If any infraction of the law was observed, notice had to be given in writing to the owner of the mine to remedy it within a specified time; and in case of non-compliance with such notice the owner of the mine was to be fined from \$50 to \$250 for the first offence, and if the disobedience was repeated the Deputy was to double the fine and to order the partial or total suspension of the working until the works which had been ordered were executed.

The direction of all workings in mines was required to be conducted by graduated or practical experts, otherwise the Mining Deputies had to take care that such experts intervened.

Notice had to be given to the Mining Deputies of death or accidents occurring in mines, and at mines employing over 200 workmen a medicine chest had to be kept, and a surgeon to give first aid in case of accidents had to be employed (Arts. 121–32). The Mining Deputies had to collect and remit to the Ministry of Public Works all useful and pertinent data for the compilation of mining statistics (Art. 28). Finally, it may be stated that all contentious questions relating to mining had to be dealt with by the proper judges and tribunals of each locality (Art. 18).

The principal object aimed at by the Mexican Mining Code of 1884 seems to have been to secure the permanent continuity of the working of mines even at the sacrifice, in cases of urgency, of the private interests of the mine-owner or his creditors. The provisions of the law were so minute in detail that they must have been found troublesome if not deterrent to practical miners on a large scale.

**General
remarks.**

THE MEXICAN MINING CODE OF 1892.

Mining property in the United Mexican States is now governed by the provisions of the law which came into force on the 1st of July 1892, for the execution of which law the President has power to make the necessary rules and regulations. The ownership and classification of minerals under this new law may be shown, as in the case of other countries, in a tabulated form as follows, viz. :

**The actual
Law.**

MEXICO — *continued.*

CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals and mining property	Ownership	To whom taxes or royalties payable	Remarks
<p>I. (a) Gold, platinum, silver, quicksilver, iron, except the varieties called <i>de pantano</i> and <i>de acarreo</i>, and the ochres used as paints: lead, copper, tin, except the variety known as <i>de acarreo</i>: zinc, antimony, nickel, cobalt, manganese, bismuth, and arsenic, either native or in ores.</p> <p>(b) Precious stones, rock-salt, sulphur; no matter how the above - named substances are formed, or what is the nature, form, and situation of their respective deposits.</p>	<p><i>In concessionnaire</i>, whom may be the first discoverer in cases where new explorations have been made, and in other cases must be the first applicant. Any inhabitant of the Republic may hold mining property.</p>	<p>To the Federal Government a tax is payable of \$10 for each mine (<i>i.e.</i> each unit of 10,000 square metres) to be paid once in stamps on the taking out of a patent, and an annual tax of \$10 for each mine constituting a concession, independently of the metal or substance of which it consists, such annual sum to be paid in three equal parts in each fiscal year under penalty of fines and forfeiture.</p> <p>Mines other than stone and coal &c. are subject to a tax of 2 per cent. on the gross produce (<i>see post</i>, p. 194).</p>	<p>The Mining Code of Mexico of the 1st July, 1892 (Art. 28), and the law of June 6th, 1892, establishing the federal mining tax.</p>

MEXICO—*continued.*CLASSIFICATION OF MINERAL SUBSTANCES—*continued.*

Minerals and mining property	Ownership	To whom taxes or royalties payable	Remarks
II. Mineral fuel, mineral oils and waters: building materials: the components of the soil, as earth, sand, and clay, and mineral substances not included under I.	<i>In the owner of the soil, who has power to work freely, without obtaining any concession, but the excavations, whether superficial or subterranean, required for the working are subject to inspection and regulation (Art. 4).</i>	In dealing with substances of the second class, the owner of the soil is no doubt free to make such terms as he thinks proper.	

The title to all mining property, legally acquired at the date of the existing law, or which should be acquired under the provisions of that law, is declared to be perpetual and irrevocable so long as the Federal tax on property of the kind is paid (Art. 5). The title or evidence of ownership of a mine acquired after the date of the existing law is to be the patent issued by the department of *Fomento* (Public Works) in pursuance of the provisions of the law (Art. 6). The ownership of a mine, except only in the case of placers and superficial deposits, is to affect only the subsoil, and not the soil or surface, except under the special conditions of the law; and the consent of the owner is to be absolutely necessary whenever private property is to be entered, except in cases of legal easements (Art. 8).

All works required to put placers and mines in proper operation are to be deemed of public utility, and are to entitle the miner to secure by condemnation proceedings possession of all the private ground which may be needed (Art. 10).

MEXICO—*continued*.

Surface land occupied or damaged. The mine-owner may occupy any surface land which may be needed for the proper working of the placers or superficial deposits, or for the construction of buildings or other dependencies of the mine, by agreement with the owner or owners of the soil, or, if no agreement can be come to, by proceedings of condemnation before the Court of First Instance of the locality, in which case the differences must be determined by appraisers appointed, one by each party, or an umpire to be appointed, in case of disagreement, by the Court, who must take as the basis of their valuation the value of the ground, the injury done to it, and the easements which exist upon it (Arts. 10–11). Mining properties and all properties bordering on them are to respectively enjoy or suffer easements of way, aqueducts, drainage, and ventilation, and such easements are to be subject, as far as the declaration of their existence and the indemnity to be paid for them, to the laws of the State, or of the Federal district, or territories in which the property is situate, subject to certain special provisions set out in the Mining Code (Art. 12).

Taxation of mines. In addition to the \$10 stamp tax and annual payment of \$10 for each unit of concession established by the new mining law, the provisions of the law of 6th of June, 1887, are to be enforced in regard to all other dues and charges on mines. These provisions are :—

Mines of stone and coal, petroleum, iron and quicksilver, native iron, wrought or cast, and native quicksilver are to be free from all local and municipal taxes, except stamp taxes (Art. 1).

Gold, silver, and all products of the mines are to be free from all excise duties, toll duties, and other imposts (Art. 2).

Such mines as are not excepted in Art. 1 are only to pay a single direct tax of 2 per cent. on the products without deduction of expenses. Metallurgical works and shops are to pay up to \$6 per 1,000 upon the value of the real estate and machinery (Art. 6).

No other tax of any kind, except stamp tax, may be imposed upon the extraction, production, or profits of mines (Art. 8). By Art. 10 of the same Act, the executive was authorised to enter into contracts for granting special privileges to persons guaranteeing the investment of capital in mining (subject to certain rules), but this article has now been repealed.

Galleries made solely for ventilation, drainage, or facilitating the extraction of ore beyond the limits of the mine are exempted from the Federal tax (Art. 33).

The Federal stamp tax and annual mining tax are payable not only in respect of concessions granted under the new law, but also under previous concessions, except in such cases as under the concession the property is exempted from taxation (Art. 28).

MEXICO—*continued*.

The owners of concessions before the date of the new law were required to bring in their papers to be stamped before October 31, 1892, in order to have the proper stamps affixed, the number of stamps being in proportion to the number of units forming the concession, it being provided that concessions granted before the date of the new law should retain their mining character as well as their own dimensions, but, for the purpose of the new law, should be subject to the unit of concession provided by such law. A failure in respect of the last-mentioned requirement was punishable by a fine equal in amount to the value of the stamps, such fine being doubled for each successive period of two months of default. Heavy cumulative penalties also attach on non-payment of the annual tax by thirds as directed, ending in forfeiture if the tax and penalties should remain unpaid at the end of the third month. Provision is made that any person or company, desirous of discontinuing the working of a mine, shall give notice in writing to the proper revenue office, so as to allow the liquidation of the tax due up to that date to be made, and also to enable the registry officers to make such entries in their books as may be proper.

Any inhabitant of the Republic may explore freely in all lands not private property by boring, but not by excavations to a greater depth than ten metres. Notice of intended explorations must, however, be given to the proper authority (Art. 13). Lands belonging to private parties cannot be explored without the consent of the owner, except by the special permission of the executive authority of the place, which can only be given according to the rules and after a due hearing has been accorded to the owner of the soil, and sufficient security has been given for compensation in respect of any damage which may result, and in any case no exploration is to be permitted within buildings or the dependencies thereof without the consent of the owners or within the limits of a town or city (Art. 15).

Except in the case of concessions being applied for by the explorer, concessions are always to be made in favour of the first applicant, and are to include as many units or mining properties as the applicant may have asked for, if sufficient ground is to be found *free*. The unit of concession is in every case to be a prismatic body of indefinite depth, having for its external base the horizontal square figure of 100 metres on each side. In cases where between new concessions and older ones some space of less extent than one unit has been left vacant, that space is also to be granted to the first applicant (Arts. 13, 14, and 15).

MEXICO—*continued.*

The Department of Works is to appoint in the different districts of the country a number of special agents, subject to its control and authority, before whom applications for mining concessions may be filed, and who on receiving the application are to publish it and get the property surveyed, and who, if no contention arises, are to forward the record to the Minister of Public Works, who issues the proper patent, whereupon the grantee is to enter into full actual possession of the mining property granted to him. If the owner of the soil opposes the concession on the ground that no deposit of metal is to be found in the place, the agent of the Minister of Public Works shall examine the ground, and if he finds evidence of the existence of such deposit, he shall at once dismiss the opposition. If no indication is discovered, a course of proceeding analogous to that provided for by the law in case of disputes as to occupation of the surface is to be followed, and the court is to decide whether the concession is to be refused or granted, and from this decision there is no appeal (Arts. 16 to 21). All vacant spaces left between mines bordering upon or near to each other at the date of the new law are directed to be granted to the first applicant.

The new Mexican mining law does not prohibit or limit the free transfer of mining concessions, but provides that, upon any such transfer, proper notice shall be given to the proper officers, so as to enable them to enter the transfer on the register, and the deed of sale must be stamped in accordance with the ordinary stamp law.

All mining companies are to be organised under the provisions of the Code of Commerce, which is to regulate them in all respects (Art. 24). The special features of the contract of *avío* appear to be taken away by the new mining law, according to which (Art. 25) this form of contract is for the future to have the character either of a *partnership*, in which case it is to be regulated under the provisions of the Code of Commerce as in the case of a company, or of a *mortgage*, in which case it is to be regulated by the civil code of the Federal district. The indivisibility of the unit of mining property, fixed by Art. 14 of the law, must, however, always be taken into account. Mortgages have to be registered in accordance with the provisions of the Code of Commerce, and a special register is to be kept for mining transactions. The mortgagee is always entitled to pay the Federal mining tax provided for by the law, and by so doing to acquire a preferential right to reimbursement of the tax. The sum represented by the mortgage may be divided into bonds payable either

MEXICO—*continued.*

to bearer or to order, in which case a common representative of all the bondholders must be appointed, through whom alone action can be taken against the debtor, and whose acts are to be binding on all (Art. 26).

Under the new law failure to pay the Federal tax imposed in accordance with the provisions of that law is determined to be the only cause of forfeiture of the mining concession, which will render the property subject to be granted anew by the Government, under the provisions of the law, to the first applicant.

The working of all mines, whether forming the subject of concessions or belonging to the owner of the soil, is to be in accordance with the rules of police and other rules enacted for the preservation and safety of the mining properties. In all other respects the owners of mines are to enjoy complete liberty of industrial action, both as to the mode and period of working mines and as to the number of workmen whom they employ. They are, however, responsible for accidents occurring in their mines through defective working, and must indemnify other properties from damages caused by want of proper drainage and for other reasons (Art. 22). When *socarones* or drainage galleries are undertaken in any locality to help the mining industry, the construction of the same is to be a matter of contract among the interested parties (Art. 23).

The general provision as to drainage galleries lastly stated must, however, be taken as subject to the provisions before referred to, under which mining properties and other properties bordering on them must either enjoy or suffer easements of way, aqueduct, drainage, and ventilation, such easements being subject, so far as concerns their existence and the indemnity to be paid for them, to the laws of the State or of the Federal district or territories in which the property is situated, subject, however, to certain special provisions under which all owners of mines are bound to permit *socarones* or galleries to be made for drainage purposes. These galleries, unless made by agreement, are only to be made by the owner or owners of properties for the preservation of which such galleries are of absolute necessity, and subject to an indemnity to be paid by the owners of the property so benefited, to be fixed in proportion to the benefit received, and to the nature and state or condition of the mine. The construction of such galleries is only to take place by permission of the Secretary of *Fomento* after receiving a report from the mining agent of the district, and after examination and approval of plans of the proposed work. The

MEXICO—*continued.*

law contains further special provisions with respect to the easements of drainage and ventilation, too minute to be detailed here, and a general provision that for the creation of an easement, whether for or against a mining property, the formally acknowledged consent of the owner is necessary, or a judicial decree must be obtained from a local court after the parties have been heard, and communicated to the Secretary of Fomento, and is not to be put into force until security has been given to his satisfaction to indemnify against damages in case the other side should obtain a reversal of the decree (Art. 12, ss. i. to xxi.).

All questions of law which may occur in mining matters are to be determined in the Federal districts and territories and in each State by the courts of competent jurisdiction, according to the Code of Commerce (Art. 27).

Mining administration.

The cognizance of everything connected with the mining business is to belong to the Department of the Fomento, Colonisation, and Industry, the head of which may take all steps advisable to promote the mining industry and secure the enforcement of the mining law. The same department is to appoint as many mining engineers inspectors of mines as may be necessary, who are to visit the mines and mining establishments, make inspections and surveys, and perform whatever professional services may be required from them (Art. 30). Penalties to be incurred for breach of the law or of the rules made for its execution are to be fixed by the Executive Department of the Federal Government; offences in or in respect of mines are subject to the ordinary courts of the respective localities (Art. 31).

Comparing the recent mining legislation with previous legislation, it will be seen that Mexico has succeeded to a great extent in freeing herself from the trammels imposed upon her by tradition and custom; and, in the place of a complex and irritating system of control, has thrown her mining resources open to that development which is calculated to follow industrial freedom of action; the old limitations of area, conditions as to labour, and general subjection of the working of mines to the supervision of State officials have been relinquished in favour of unrestricted freedom as to area and conditions of working, subject only to the payment of a simple and moderate Federal Government tax, and to ordinary regulations and right of Government inspection directed towards securing the safety of workmen and the protection of property, whilst the risk of forfeiture has been reduced to a minimum. It remains to be seen how far this advance towards complete freedom of industrial action can be maintained, or can be considered final, and to what

General remarks.

MEXICO—*continued*.

extent it will assist in developing the magnificent mineral resources of a country which is confidently believed to be still capable of an even more lavish production in the future than it has already afforded through long centuries of an historic past.

THE ARGENTINE REPUBLIC.

The mining resources of this country, especially of gold, silver, iron, copper, and coal, appear to be great, though not as yet very extensively developed. With the view of encouraging the mineral development of the country, steps have been taken by the Government to establish a bureau of mines and geology at Buenos Ayres, and a school of mines, to provide an official mineralogical survey of the country, and a new Mining Code (of great length) has been promulgated, and came into force on the 1st of May, 1887.

History of the Mining Law. The mining legislation of the Argentine Republic (formerly known as La Plata) was, like that of the other States of Spanish America, based upon the Ordinances of Mexico, although such Ordinances do not seem to have been formally extended to La Plata. After the establishment of independence two kinds of government were instituted, viz., the National or Federal and the Provincial. The territory then belonging to the State was vested in the Provincial Government, but the National Government afterwards acquired extensive territories from the Indians. According to an article of the Federal Constitution, the mines in Provincial territory belong to the Provincial Government, and those in the National territory to the National Government; the latter, however, retains the right to frame the mining laws for the entire Republic and to inspect the mines in Provincial territory. No great alteration of the mining law appears to have occurred until the promulgation of the new code in 1887. It is stated, however, that this code has been found defective, and that there is a project for its reformation before the National Congress.¹

Classification of minerals. As might have been expected, this code in many respects resembles the Mexican Mining Code of 1884, but the classification of mines differs from that of Mexico in being more precise and in being divided into three classes, one of which (viz., the second class) is subdivided in a very special manner as follows, viz.:—

¹ This and one or two other statements are taken from a paper by Mr. H. D. Hoskold, published in the Transactions of the Federated Institution of Mining Engineers, vol. 3, part 4.

CLASSIFICATION OF MINERALS.

Minerals	Ownership	Remarks
I. <i>Mines</i> , viz.: of (a) gold, silver, copper, &c. (comprising most metals); (b) coal, lignite and anthracite; (c) bituminous wells or deposits and mineral oils; (d) precious stones.	<i>In concessionnaire</i> or his assigns, the concession having been obtained in accordance with the provisions of the law.	In cases of discovery, it is requisite to the obtaining of a concession that the applicant should make, within 100 days subsequent to the registration of his petition, some mining work sufficient to show the position and thickness of the vein and the nature and quality of the ores.
II. 1st. Mines of: (a) borates and nitrates; (b) deposits of salt and peat; (c) some metals not mentioned in the first class; (d) pyritous, vitriolic, aluminous and magnesian earths, sulphur, &c.	Granted by preference to the owner of the soil; but may be granted to strangers, if within 100 days after receiving notice he does not work or benefit them.	The legal areas of <i>pertenencias</i> vary according to the form and nature of the deposit as under the Mexican Code of 1884, that of a coal mine being 180,000 square metres, and that of nitrate and borax mines being an area of 1,000,000 square metres.
2nd. (a) all metalliferous sands and precious stones carried by rivers or found in their beds; (b) placers; (c) the tailings, washings, and refuse and slag-heaps of abandoned mines.	Permitted to be of common use and to be worked by whoever wishes to do so under the provisions of the law.	In the case of the 2nd subdivision of the 2nd class, no concessions are required, but the parties must constitute <i>pertenencias</i> of rectangular form, varying from 10,000 to 60,000 square metres, which may be surveyed with the intervention of the authorities.
III. Quarries of building stone, marble, granite, &c., and other building materials.	<i>In the owner of the soil</i> or his assigns.	

ARGENTINE REPUBLIC—*continued*.

In other respects the provisions of the Argentine code seem generally to resemble those of the Mexican code of 1884, though in some respects they more nearly approach the provisions of the recent Mexican mining law, *e.g.*, in providing that the Government is not to interfere with the management of a mine except where the safety of life or the preservation of property is involved.

BOLIVIA.

The principal mineral product of this country at present is silver, though gold also appears to be found in considerable quantities.

The present mining law was promulgated on the 13th of October, 1880, and is supplemented by rules made on the 28th October, 1882. The law (which has the unusual merit of brevity and simplicity) declares that all metalliferous substances belong originally to the State; and distinguishes the ownership of the *soil* (which is defined as the exterior coat, or surface, extending downwards only to such a depth as may be reached by the work of the owner, either when engaged in agricultural pursuits, or when paving or making foundations, or doing any other labour whatsoever different from mining), and which is not to be impaired except upon proceedings of condemnation, from that of the *sub-soil* (which is defined as being all that lies beneath that coat and extends downwards indefinitely), and which is under the control of the State, and may either be abandoned by the State so as to become common property, or be ceded or conveyed by the State to the owner of the soil, or granted by a regular concession in the form of a patent by the State to a third applicant (Arts. 1-3).

Sands bearing gold and all other metallic productions found in rivers or placer mines in vacant lands, whether belonging to the State or private individuals, are subject to concession (Art. 12), and the tailings, reworkings, slag, and refuse heaps of abandoned mines and smelting establishments may be granted to any applicants, but are to be considered vacant if not worked for six months (Art. 13). The concessions of mines are in perpetuity, and the grantees have usually to pay a patente of five bolivianos (=about 16*s.* 3*d.*) per hectare per annum under penalty of sale and forfeiture, but miners may declare their mines abandoned, and may thenceforward escape payment of patent fees (Arts. 16-20).

BRAZIL.

The mineral resources of Brazil, which are known to be great in iron, coal, and other substances, have not been extensively developed, except so far as gold and diamonds are concerned, nor have the mining laws been codified, but they appear to follow the old Portuguese law, which was based on the *regalien* principle, or the system of concession. Several laws or decrees on the subject of mines have been passed in recent years, including a decree of the 26th September, 1867, which authorised strangers to demand and obtain concessions either in their own names or those of companies. There are special rules with respect to *diamond* mines, which, in the case of new mines, are leased by public auction. Other metals cannot be explored or worked without licence from the Government except by Brazilian subjects, who may undertake mining on lands of their own, either by themselves or by assigning the right to companies (national or foreign) without licence (Decree of January 27, 1829), but they must pay the taxes fixed by law *on gold* extracted from mines. It is understood that formerly the Government levied a tax of 1 per cent. on all gold raised. This was subsequently abolished, and a tax of 4 per cent. on profits was tried for a short time, but owing to evasion of the law by means of false declarations of profits, this system was also abolished, and a system of taxation on machinery (*e.g.*, £5 per annum on every stamp crushing ore) was substituted for it, but this system of taxation is said not to be satisfactory, as it falls heavily on mines which produce poor ore, and necessitates the treatment of a large quantity.

In the case of new concessions, none but free hands are to be employed; mines of gold, silver, copper, or lead are subject to existing and future taxes, but other minerals are exempt for a period of five years from taxes, whether for exploration or working, and mining companies are exempt from import duties on materials and tools which may be ordered from abroad for the purposes of their undertakings. In accordance with the Portuguese law, the right of working only extends to the substances specifically mentioned in the act of concession.

The special provisions with respect to diamond leases appear to be: (1) That they should be made by public auction for terms of from four to ten years; (2) That a single lessee should not have granted to him a greater extent of land than 100,000 square *bracas* (a square *braca* = 5·906 square yards), all portions being contiguous; (3) The

**Diamond
lands.**

BRAZIL—*continued*.

minimum price of each square braca to be 30 reis (about = $\frac{1}{2}d.$) per annum; (4) The first payment to be made at the date of the lease, and the others at the first of each following year, security being given; (5) Rivers and other places of difficult exploration may be granted to companies for terms not exceeding fifteen years, in areas not exceeding one square league, on binding themselves to pay a tax to be agreed on either in proportion to the number of persons employed or the value of the diamonds extracted; (6) Lands not leased or granted to companies may be worked by any person obtaining a licence from the administration, holding good for one year, at certain specified fees according to the number of persons employed; (7) When territory leased includes cultivated land or improvements, the proprietor to be indemnified according to the forms of law.

CHILE.

The abundant mineral resources of Chile have already been extensively developed, especially as regards the rich deposits of nitrate of soda, but it is believed that there is ample room for further enterprise.

The mining law, which until recently was in a primitive state, especially as regards the want of security in title from the risk of "denunciation," depended to a considerable extent upon the Mining Ordinances of Mexico. After the proclamation of independence it was modified, and subsequently codified by a law which was promulgated in 1874.

The present law of mines in Chile is contained in a code which has been in force since the 1st of January, 1889. This code is very lengthy, consisting of 166 articles, and detailed, but the special features may be gathered from the following table and summary:—

**History of
the Mining
Law.**

**Actual
Law.**

CHILE—continued.

CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals and mining property	Ownership	To whom taxes or royalties payable	Remarks
I. Mines of (a) gold, silver, copper, platinum, &c., whatever may be the form and origin of their deposits; also (b) mineral substances of all kinds in unoccupied State or municipal grounds (Art. 2).	<i>In concessionaire</i> from the State or his assigns, the first discoverer being usually entitled to the concession. Do. do.	These mines pay an annual patente of 10 dollars per <i>hectare</i> (Art. 130). Mines of the substances (b) only pay an annual patente of 5 dollars per <i>hectare</i> (Art. 130).	The discoverer must, within 90 days of registering the mine, make a shaft or gallery at least five metres in vertical depth, to fix the position of the property and to prove the existence of the mineral (Art. 35).
II. Coal and other fossil mines not specified in the first description, also the right to work deposits of salt on maritime shores or within lagoons or lakes within an owner's limits of demarcation prolonged towards the sea, lagoon, or lake.	<i>In owner of soil</i> , who, if he works them, must himself obtain a concession to constitute the mining property.	Mines worked by the owner of the soil pay no patente until they are transferred to another person as real property separated from the soil, in which case they pay as above (Art. 131).	

CLASSIFICATION OF MINERAL SUBSTANCES—continued.

Minerals and mining property	Ownership	To whom taxes or royalties payable	Remarks
III. All guano deposits in grounds of any dominion whatsoever, and also the deposits of nitrates and analogous ammoniacal salts in State or municipal grounds in which rights have not been constituted by private persons.	Reserved to the State.		
IV. All loose metals and precious stones found on the surface of the soil.	In the first occupant of the soil (Art. 3).		
V. The working of auriferous sands, or those producing tin, and all other mineral productions of rivers or placers, when found in unoccupied ground of any dominion or ownership.	<i>Free</i> : but if workings carried on in fixed establishments, mining properties must be constituted (Art. 4).		
VI. The refuse heaps, slag heaps of smelting furnaces, and reworkings of abandoned mines (Art. 5).	Considered as common property, until the mines to which they belong become private property.		

CHILE—*continued.*

A concession of mines carries with it the perpetual proprietorship, subject to the annual payment of a tax per superficial hectare of the land occupied (Art. 13). It can only lapse by non-payment of the patente within the time fixed by the law (which is that it must be paid in advance during March in each year), in which case the mine will be sold to the highest bidder on condition of continuing to pay the patente, and, if there is no bidder, the ground is declared free. Should the mine be sold the sum owing to Government is deducted from the purchase money, and the balance less the cost incurred paid over to the owner.

Nature of
ownership
of conces-
sions.

All persons capable of acquiring real property in Chile may acquire mines by all legal means, except certain magistrates and officials, including the officials of the mining courts, and the prohibition extends to their undivorced wives and children under age (Arts. 21-2).

The mines may be worked freely without subjection to any technical prescriptions, except the observance of the rules laid down for police vigilance and safety (Art. 68). Certain special provisions of law are established by this code for the benefit of miners, thus: The contracts by which mines are transferred to third parties cannot be rescinded by reason of any serious injury being done to either party by too little or too much being paid for the property (Art. 84). It is understood that this provision is different from that of the Civil Code, which governs all other real property, by which it is provided that contracts for the transfer of property may be rescinded when it is proved that the purchase money was less than half or more than double its real value at the time of sale.

Again, the period of possession necessary to acquire mines by prescription is only two years for the ordinary and ten years for the extraordinary prescription, without distinction in all cases between persons present or absent (Art. 86).

There are also special provisions with reference to sales of stolen ores, resembling the provisions of the English law relating to sales in market overt, viz., that ores bought on the sorting floors of a mine or from a known miner, or in the presence of a judge, or of witnesses who are not employees of the purchaser, or on a certificate given by the local authorities, in which it is stated that the vendor actually works a mine of the ores sold, or that he has acquired the ores by a legitimate title, carry a good title, that is, they cannot be recovered in any manner whatever, even by a rightful owner.

On the other hand, the purchase of stolen ores, made other

CHILE—*continued*.

wise than under the conditions before referred to, subjects the purchaser to being presumed to be a concealer of the theft, in which case it shall be sufficient for the claimant to prove that ores have been stolen from him, and that those claimed by him are similar to those produced at his mine (Arts. 87-9).

The Chilean code lays down special rules with respect to contracts for the hire of workmen by time, and provides that such contracts, if for more than one year, must be in writing, and makes a variety of special provisions as to notice of dismissal and compensation in lieu of notice on either side, and gives a preferential right to workmen and other employees of the mine to payment of wages over other debts (Arts. 90-9).

Questions relative to mines have to be dealt with by the ordinary tribunals; except questions as to the amount of indemnities, which have to be decided in the absence of agreement by two experts, one named by each party, and a third, in case they disagree, by the Judge (Arts. 149-51).

COLOMBIA.

It is stated that the total production of the mines of Colombia since the Spanish conquest up to the year 1888 may be estimated at \$672,000,000, of which \$639,000,000 are of gold and \$33,000,000 of silver. These figures give some idea of the importance of Colombia as a mineral-producing country. Besides the precious metals, iron, copper, lead, and precious stones are abundant in this country, whilst salt and coal mines are also found in extensive deposits. The mining code of one of the States, viz.—Antioquia—is said to be adopted generally throughout the Republic. According to this code the mines are divided into three classes, apparently divided rather with regard to the ownership than to the character of the substances, as follows, viz. :—

COLOMBIA—*continued.*

CLASSIFICATION OF MINERALS.

Minerals and mining property	Ownership	To whom taxes or royalties payable	Remarks
I. Mines of emerald, rock-salt, coal and phosphates of lime (Art. 1).	<i>In the State.</i>	There is no tax on products, but an annual tax is levied from mines, whether worked or not, <i>i.e.</i> , \$5 for every claim of placer mines and from precious stone mines, and \$4 on every claim of quartz mines.	
II. Mines of gold, silver, platinum, and copper (Art. 1).	<i>In the departments or provinces.</i>		
III. All other mines, of whatever class (Art. 1).	<i>In the owner of the soil.</i>		

The State cedes and transfers the right of ownership and the possession of mines to any persons, whether native citizens or aliens, who are legally capable of becoming owners of any kind of property, the exceptions being, insane persons or idiots, foreign Governments, and citizens of other countries in which Colombians cannot hold property (Art. 2). The system of concession followed appears to be similar to that adopted in Mexico and most of the Spanish American States. The size of the *pertenencia* appears to be in the case of "placer" mines, 25 square kilometres; and, in the case of quartz mines, a rectangle of 600 metres long and 240 wide.

COSTA RICA.

Costa Rica is rich in mines of gold, silver, copper, and lead, not as yet extensively developed.

The law follows the old Spanish law, necessitating denunciation to obtain a title to a mine, such title being awarded to the first denunciator. The extent of the *pertenencia* is 200 varas (one vara=about 33 inches) in length, by 100 in breadth. Mines

COSTA RICA—*continued*.

abandoned for one year are considered vacant, and may be again denounced.

Mining machinery is admitted without the payment of custom duties. There is no Government or municipal tax levied on mines. The law makes no distinction between the mines of precious metals and all other mines ("Mines and Mining Laws of Latin America").

CUBA.

The island of Cuba is famous, not only for the abundance, but also for the excellence of the gold which it has produced. Silver, copper, &c., are also found in the island; but the working of minerals has in later times been superseded by the cultivation of the sugar-cane, though in quite recent years there has been a great increase in the production and export to the U.S.A. of iron ore and manganese ore.

As before observed (p. 136), the Spanish law of 1868 has been extended to the island of Cuba, and that law (or rather the Spanish law of 1859 as amended by that law) must be taken to govern the mining industry of the island. Special exemptions have, however, been made from the ordinary imports to encourage the development of mining in Cuba; thus mines of iron and combustibles are freed from the imposition (for 20 years at least) of the superficial tax; all minerals and metals may be exported from the island free of export duty; coal imported for mining or metallurgical purposes is free from import duties; taxes on mines are abolished, and machinery and other articles imported for mining purposes pay no duty (Decree of April 17, 1883, extended July 28, 1887). There, however, appear to be still some port charges and navigation dues payable by vessels entering in ballast and leaving with mineral. Special privileges appear to have been granted to American companies or syndicates working mines on the island ("Mines and Mining Laws of Latin America").

DUTCH GUIANA,¹ OR SURINAM.

This country, though as yet little developed, appears to offer considerable attractions, especially in the way of alluvial and quartz gold-mining, to mining adventurers. The mining laws and regulations in force, viz., the Ordinance of September 7,

¹ The laws of British Guiana are referred to under the head of the English Colonies (p. 273), and of French Guiana under the head of French Colonies (p. 63).

DUTCH GUIANA—*continued.*

1882, as amended by the Ordinance of September 18, 1884, present somewhat special features. The following is a short *résumé* of these ordinances :

No one may explore private lands without the written permission of the owner, or Crown lands without the written permission of the governor (Art. 1) ; but owners of land **Searches.** may undertake explorations on their own property after having given notice in writing to the director of Crown lands (Art. 2) ; applications for permission to explore must be made in a special form, and may be refused by the governor, after having heard the council of administration, and can only be granted if made in respect of land where no concessions for working have already been granted. Permissions to explore are granted free from expense, but not for a period of more than one year, or for a larger area than 20,000 hectares. The holder, however, has a preferential right to a concession of part of the whole area for which he held permission to explore, if before the expiration of the term for which he held such permission he has made application to the governor in the prescribed form (Arts. 3 and 4). No one must proceed to explore without having exhibited his permit to the commissary of the district in which the land is situate, who must register his name and description and the names and description and terms of engagement of all persons employed by him, and no British Indian labourers must be employed (Arts. 5-7).

No concession of Crown lands to work minerals is granted **Concessions.** for a shorter period than one year or a longer period than thirty years, or for any less area than 200 hectares (Art. 8).

Payments must be made in advance, for the 1st and 2nd years of 10 cts. Dutch currency (10 cts. Dutch = 2*d.*) per hectare ; for the 3rd and 4th years of 25 cts. per hectare ; and for each ensuing year of 50 cts. per hectare, and in case the concession is granted for more than a year security for the further payment must be given (Art. 9).

Concessions must be applied for personally or by attorney authorised in writing, the applications to be registered immediately on receipt, and in case there are more applicants than one for the same tract of land, the preference will be given to the first applicant on the register complying with certain subsequent forms as to application to the governor, furnishing particulars of the land and otherwise and paying fees as before mentioned (Arts. 10-13).

If the application is granted, the governor will furnish a

DUTCH GUIANA—*continued.*

concession to the applicant to work ; if it is refused, the money paid by the applicant for the whole or such part of the application as is not granted will be refunded (Art. 14).

The rights of a mine-owner under a concession in Dutch Guiana seem to be similar to those conferred by concessions in most other countries of South America, except that (as the concessions are only granted in respect of Crown lands) his rights with respect to the surface are perhaps rather more than usually extensive ; thus he may use timber on his ground for his work or for his tools, and he may plant on the ground fruit trees or vegetables for the use of his labourers, though he is not allowed to use the ground for general agricultural purposes, or to cut down timber for sale without the special permission of the governor (Arts. 19 and 20). He is also subject to similar conditions with regard to the employment of labour as are before mentioned to be imposed upon persons making searches for mines.

Transfers of concessions are permitted with the written consent of the governor, but the governor may refuse his consent after having heard the Privy Council, stating reasons for such refusal. Every deed of transfer of the whole or part of a concession is subject to a stamp duty of two per cent. on the amount of the consideration, and in case of a transfer a new concession must be taken out (Art. 27).

A concession may be renewed on application to the governor (Art. 28), otherwise the rights of the worker cease on the expiration of the time for which the concession was granted.

A concession may be withdrawn by the Supreme Court on a suit by the Attorney-General by adjudgment for knowingly engaging British-India immigrants or British labourers for the working of minerals, or for transferring a concession to work without the governor's consent, or for other specified offences against the Mining Code or the general law of the country, and in some cases the judge can, in pronouncing the withdrawal, also recall all other concessions held by the same concessionnaire (Art. 30). On the withdrawal of a concession the rights of the concessionnaire are to be sold by public auction, and the proceeds are to be paid to the concessionnaire less the usual fees for transfer of a concession. If there is no tender, the term for which the concession was granted is to be considered as expired (Art. 31).

At the expiration of a concession the worker can remove all building and plant erected by him (Art. 33). The rights of natives are to be respected (Art. 35).

Considerable penalties are decreed on persons making

DUTCH GUIANA—*continued.*

searches for minerals without consent, or working on Crown lands without obtaining a concession or otherwise violating the provisions of the mining law (Arts. 36–8), and certain officers are entrusted with the duty of carrying the law into effect (Art. 40).

ECUADOR.

This country abounds in gold and other minerals, but the mining industry is not as yet highly developed. The British Foreign Office Report No. 262 of 1892 contains a graphic description of the mineral resources of Ecuador, picturing the country as a veritable (though undeveloped) El Dorado; it also describes a district called St. Helena, near the sea-coast, as being a very prolific oil-field, the claims in which have all been taken up by a syndicate with a view to sale.

The mining legislation of Ecuador consisted until quite recently of different laws enacted at various periods, which continued in force, except so far as the earlier were inconsistent with the later laws. These laws consisted of portions of the Spanish Mining Ordinances and the later laws of Spain and Mexico modifying such Ordinances, certain mining regulations promulgated by Bolivar in 1829, and the Mining Code of Ecuador enacted by the Congress of that country on August 26, 1886. The Ecuadorian Congress has, however, quite recently passed a new law, dated August 8, 1892 (and sanctioned on the 15th of the same month and year), reforming the Mining Code of the Republic. A translation of this new law is contained in the British Foreign Office Report No. 273 of 1893, from which it appears that the alterations tend in much the same direction as those recently made in the legislation of the neighbouring country of Peru, by securing the perpetual possession of mines to private individuals under the sole condition of paying annually a patente of 8 sucres = about £1, for each holding, the proceeds of which are to be devoted to the opening-up of and repairs to roads that will connect the mining districts along the coast, and in general to all such works that may be of well-known utility to the mining industry. The new law also provides that anyone may denounce and acquire, in accordance with the resolutions of the code, up to twenty holdings, provided that they are on unoccupied ground and contiguous to each other. The person making the denunciation is required to take certain steps to demonstrate the existence of the mineral which he proposes to work. The holdings, in regular veins, are to be of an area of 600

ECUADOR—*continued.*

metres in length, by 200 metres across, in gold sands, &c., of 50,000 square metres, measured as required by the interested party, but so that the width be not less than 50 metres, and on veins of coal and petroleum of 200 metres in width by 1 kilo. long. If the patente is not paid the mine is to be sold by the Government, and the proceeds after deduction of the sum owing and costs is to be paid to the concessionnaire. For 25 years from the date of the new law an exemption is granted from all fiscal and municipal taxes on the transfer of proprietorship in mines and from all other royalty dues on mines or their produce; and for the same period mining property is not to be charged with any other contribution than the duty before mentioned, nor are any fiscal or municipal dues to be charged for the importation of machinery, tools, utensils, and explosives for the working of the mines or the treatment of their produce. Several substances, including coal and petroleum, are specifically added to the list of mines subject to be acquired by denunciation, and it is declared that precious stones and minerals which may be found isolated on the surface of the ground belong to the first finder.

GUATEMALA.

The extent of the mining legislation of this country appears to be somewhat out of proportion to the amount of its mineral production, which at present is not of much importance.

The laws in force in the Republic on the subject of mining are stated to be all contained in the Fiscal Code, which came into operation on September 15, 1881. The general provisions of this code in respect of mines seem to be similar to those usually contained in the mining laws of the other Spanish-American States. The following, however, seem to be somewhat special provisions of the code of Guatemala concerning concessions:—

Auriferous sands, iron deposits, and other minerals in river-beds and placers, on whatever lands they may be found, are free to all persons desirous of working them without any special permit from the authorities. If mills or other permanent structures are intended to be erected, patents must be applied for (Art. 440).

Any persons, whether natives or foreigners, discovering deposits, lodes, or veins of metal or precious stones, are entitled to the concession thereof (Art. 458), and the fact of finding such substances is to be considered a "discovery," although the mine or locality shows that previous attempts have been made to discover them, provided that such attempts have not been the sub-

GUATEMALA—*continued.*

ject of a prior concession; but persons working old abandoned mines may be considered "discoverers." Mining locations consist of rectangles of the length of 400 metres=1,300 feet in the direction of the vein, and 200 metres=650 feet in width (458-67). Placers, however, comprise 10,000 square metres, and may be either in the form of a parallelogram or square, or in a series of squares, without leaving intervals, at the option of the miner (Art. 469). On making a discovery, the discoverer may obtain a patent to prospect for 90 days (Art. 489). Applications for patents must be made to the political division of the department wherein the mine is located or to the Finance Minister (Art. 494). Any miner wanting to prospect his claim by means of galleries, shafts, or other excavations may execute such works on his own or adjoining property not containing other mines (Art. 518). Mines are to be worked and put into operation scientifically, according to the provisions made to ensure safety, and in accordance with the police regulations (Art. 558).

HONDURAS (REPUBLIC OF).¹

Here, as in most of the Central American States, there appears to be a vast mass of mineral wealth waiting to be developed by the application of capital and scientific skill; indeed, as regards mineral resources, Honduras is said to rank first amongst such States. The iron ore is said to occur in vast and inexhaustible beds, and to be so pure that it is forged without smelting. Anthracite coal of good quality is said to have been recently discovered near the Atlantic port of La Ceiba.

The mining laws of Honduras consist of a lengthy code (in 201 Arts.) promulgated on August 27, 1880, as since amended (see p. 216 *post*).² The principal features of this code resemble those of the recent Mexican mining legislation, but the law has special features (some of which resemble the special features of the law of Chile), as follows, viz., as regards the classification of mineral substances, it is to be observed that in Honduras deposits of coal and other fossils, tin-ores and precious stones, with the exception of opals, are the exclusive property of the State and cannot be denounced, also that the minerals and precious metals which are found as "float" on the surface of the soil

¹ As to the laws of British Honduras, see p. 272 *post*.

² Since the above analysis of the Mining Code of Honduras was prepared, a translation of the text has appeared in the F. O. Rep. No. 1314 (1893), together with translations of the later decrees on mining, from which the notes which will be found later on of the decrees of 1887 and 1888 have been taken.

HONDURAS—*continued.*

belong to the first occupant (Art. 2), and that the minerals for building purposes or ornament, sands, slates, lime, and other substances of that kind, when found in the uncultivated lands of the State or municipalities, are to be of common use to all persons who may design to apply them to building, agriculture, or the arts, without prejudice to the right of the State or municipalities to concede them to persons by special contracts (Art. 3); gold-bearing and tin-bearing sand and other mineral production of rivers and placers in uncultivated lands of any ownership whatever are for free use, but if operated by permanent works, must be divided into mining claims (Art. 4); the dumps, scoria, and tailings of abandoned mines are considered as common property, so long as these mines have not become particular property (Art. 5).

The law as to the persons who are entitled to acquire mines in Honduras resembles that of Chile (*ante*, p. 206). The law as to the number of claims to which a discoverer may be entitled resembles that enacted by the Mexican code of 1884 (*ante*, p. 185); the discoverer must uncover the croppings or veins or open the deposit of his discovery within 180 days from the day of registering the declaration of his discovery, so as to establish the existence of the mine (Arts. 31–3). Mines are to be considered as abandoned if they have not been worked by four men during one whole consecutive year or during a period of 400 consecutive days in two years (Art. 53). But in certain cases the risk of denunciation for abandonment may be avoided by payment of a local tax (Art. 57). The size of a claim in regular veins is 250 yards in length and from 100 to 200 yards in width according to the inclination of the vein to the horizon; in irregular masses or deposits the claim is a square of 200 yards a side (Art. 80); in auriferous or tin-bearing sand and others mentioned in Art. 4 the claim is to consist of 10,000 square yards in the form of a rectangle or square or a series of squares in contact with each other, and without intervening spaces, but in no case is the claim to have a greater length than 300 yards (Art. 81). A miner is the exclusive owner within the limits of his claim not only of the registered vein or deposit, and also of all other mineral substances which may be found in it (Art. 90), but he is forbidden to follow them into anyone else's claim. Mines must be worked according to the rules of the art of mining and to the regulations for security and order laid down by the President of the Republic, and are to be subject to inspection by the administrative authority (Arts. 108–9); and somewhat minute provisions are set out in the code as to the

HONDURAS—*continued.*

working of mines (Arts. 108-24), and as to contracts with workmen (Arts. 150-8).

Under a decree of the 18th November, 1882, the workers of mines in Honduras are relieved from payment of export duties on the products of their mines, and are empowered to bring in free of duty all machinery, tools, &c., requisite for carrying on their mines, and to use wood on public or vacant lands subject to the regulations of the Government or municipal authorities, whilst the operatives in mines are freed from military duties when employed in the mines. By a later decree of March 17, 1887, the National Congress has conceded to miners the exclusive use for the working of their mines of all woods found on the mining claims on national lands.

The Mining Code has been recently supplemented and explained by a decree of September 24, 1888, which declares that not only mines, but also working grounds, mineral zones, sites for reduction works, mill sites and water privileges, necessary for the utilisation of their products as well as for other uses, are to be acquired by denunciation or concession from the Government (Arts. 1-5); declares that applications to the Government for any of the rights before referred to must be published, and that preference is to be given according to priority of application (Art. 7), but that in case of simultaneous applications, preference is to be given to those having the largest capital, and who will give guarantees for working on the largest scale (Art. 12); and establishes a system of arbitration for the determination of questions respecting concessions (Arts. 13-20).

NICARAGUA.

Silver mines have been extensively worked in Nicaragua, and both gold and silver mines are now worked there. Nicaragua, of course, possesses an elaborate mining code, which was promulgated on the 11th February, 1876, and contains 431 articles or sections. The general provisions of this code resemble those of the Mexican and other Spanish-American States; but *mines*, the ownership of which is declared to belong exclusively to the nation, with power to transfer to private parties under the conditions of the law (sec. 4), are defined to include all deposits of metallic ores, or of coal and combustible substances, salt and precious stones, whatever the form may be in which they are found, either on the surface of the ground or under it (sec. 1); whilst all other deposits of mineral substances are to be of common use, if found on unappropriated lands, or to be

NICARAGUA—*continued.*

the private property of the owner of the soil if found on private grounds; notwithstanding which provision, if the substances so referred to can be made use of for the manufacture of crockery, glass, bricks, or other industry, or for constructions in which the public is interested, the working of such substances may be made the subject of concession by Government even if in private lands, but in such case the owner of the lands must be properly indemnified (sec. 3). No one may work a mine even in his own ground, except by virtue of a concession, which may be granted by the competent authority to any person entitled under the general law to enter into binding obligations, or his duly accredited representative (sec. 6). No special concession is however required to work auriferous sands or the iron deposits of *aluvión* or *transportacion*, or the other mineral products of rivers and placers, except the work to be done requires an expense of more than \$1,000 and the establishment of a permanent shop (sec. 8). The slag or tailings of an abandoned mine cannot however be denounced or granted separately from such mine (sec. 11). Applicants for concessions must first ascertain particulars of the vein and show that there is ground enough to constitute a mining property (sec. 12). Any person capable by law of entering into binding contracts may make searches, and no private owner on being indemnified can prevent him (sec. 13). Certain persons, as in Chile, &c., are forbidden to acquire or work mines; in this country the prohibition is expressly extended to the members of any regular monastic order and the curates of parishes (sec. 25). The other provisions of the code do not appear to differ sufficiently from the provisions of the Mexican Code of 1884 to call for detailed reference.

PARAGUAY.

The mining industry of this country appears to be of little present importance, or, at any rate, is at present undeveloped; and under these circumstances it has not been considered necessary to make any inquiry as to the mining law of the country.

PERU.

The mineral wealth of Peru has a worldwide fame, which has been established for centuries. In olden days it chiefly depended upon the production of precious metals, but of late years the mining industry has been to a great extent diverted to the exploitation of the more humble if not less useful products

PERU—*continued*.

of the guano and nitrate beds, which have been found in abundant deposits on the southern coasts of the country, though, since the war with Chile, the principal nitrate field, in the department of Tarapaca, has become the property of the last-mentioned Republic. Petroleum is said to abound in the department of Piura, situate on the north-west coast-line. The most productive silver-producing district appears to be the Plateau of Junin, situate in the Cordilleras of the Andes at an altitude of over 13,000 feet above the sea, and including the famous Cerro (hill) de Pasco,¹ which has been worked during the last 250 years and upwards, but the difficulties of carriage are still such that the general development of the mineral industry of the country is as yet in its infancy. Coal of good quality (both bituminous and anthracite) is said to exist in inexhaustible quantities in various parts of the country.

For many years after the deposition of the Incas by the Spaniards the mineral legislation of Peru depended on various royal decrees or ordinances, which were afterwards codified into a body of law bearing the title of "The Ordinances of Peru," promulgated in the year 1683. These were afterwards superseded by the Royal Mining Ordinances of Mexico, which were promulgated in Peru in the year 1783, as amended or modified by modern legislation, and have until recently continued in force in Peru, although a mining code was drawn up by a Commission appointed for the purpose by Congress in 1857.

In the year 1887,² however, the Government sanctioned a new law passed by an Act of Congress (manifestly designed to encourage the development of mining in the country by permitting foreigners to own mineral property, and by providing for the security of mining titles), under which any person may denounce a mining claim, and, once in possession of his title-deeds, may work the property without other obligation than the payment of a yearly royalty tax of thirty soles (\$30), about £5, payable half-yearly. On payment of this tax the owner is secure against all risk of forfeiture. In 1890 Congress promulgated an additional article by which no tax or contribution, beyond the royalty tax of \$30 for each claim, can be imposed for twenty-five years from

¹ An interesting description of this district is given in a paper by Mr. A. D. Hodges, published in the Transactions of the American Institute of Mining Engineers, 1888.

² These particulars of the existing law, which does not appear to have been published in English, have been supplied through the courtesy of Senor Pezet, the Consul-General for Peru in London.

PERU—*continued.*

that date. This tax extends to coal and petroleum (Art. 2) and to surface workings (Art. 3). If the tax is not punctually paid the owner loses his title to the mine (Art. 5). The proceeds of the tax are to be applied—1st, to the National School of Mines; 2nd, to the support of a special body of mining engineers to serve in the several mining districts; and, 3rd, to the general encouragement of mining (Art. 11). The system of mining deputies for mining districts, according to the old Mexican law, is still retained, and the deputies are directed to keep a register of mines, in which all titles are to be entered as they are issued, and copies of the titles, which are issued by the deputies, must be at once forwarded to the Direction of Industries (mining section) of the Ministry of Finance and Commerce (under which the Direction of Mining is placed), where the titles are entered on a general register (called the “Padron General de Minas,” and published at Lima in the months of March and September in each year), and a certificate is given to the interested party (Arts. 12–16). Any failure to pay the tax is also entered on the general register, with a notice that the mine is acquirable through non-payment of the tax (Art. 16). Where there are no mining deputies, the Judges of First Instance may issue titles for mining claims and generally do the business of mining deputies (Art. 20). Though foreigners may acquire and work mines in all the territories of the Republic, subject to the obligations of the law, they may not take part in the government of the mines (Art. 22). The law provides for the appointment of mining engineers in the different mining districts, and prescribes their duties, including that of teaching in their respective districts, for the training of practical managers of mines (Art. 22).

Building materials, such as stones, clay, &c., belong to the owner of the surface, and their working is not subject to the mining laws (Art. 24).

Saltpetre (nitrate of soda), borax, potash, and other alkaline substances are governed by special regulations, which declare them to be fiscal property, and any discovery of such substances must be announced to the Government; nor may they be worked without a special concession, a condition of which is the commencement of actual work within a year from the date of the grant under risk of penalties and forfeiture.

Discoverers of new fields of nitrate or other alkaline substances receive fifty claims free as a reward on the valuable quality of the nitrate being admitted by the Government experts (Act of Congress of December 22, 1888).

SALVADOR.

In this country are found numerous gold and silver mines, and some mines of lead, iron, copper, tin, quicksilver, antimony, and coal.

Salvador enjoys its own mining code, which is substantially similar to the Mexican Code of 1884.

The chief features of the law appear to be as follows :—

The ownership of mines is acquired by means of a concession granted by the competent authority.

A concession carries with it the right to mine, which the concessionnaire may then freely dispose of, as well as of its produce, like any other property.

Concessions of mines are for an unlimited period so long as the concessionnaire complies with the conditions of the law.

No concession can be granted before the petitioner has discovered the substance which he desires to work, or unless he has the ground sufficient to constitute a legal claim.

Miners and all other persons continuously engaged in mining works are exempted from all military and municipal service and from imprisonment for civil debt, and their wages cannot be attached for such debts to the extent of more than one-fourth. They are also exempted from the tax called "beneficiencia," which is imposed on the other inhabitants.

SANTO DOMINGO, OR THE DOMINICAN
REPUBLIC.

This island is said to be rich and varied in mineral wealth, which is as yet but little developed. The deposits which have been found include gold, iron, copper, salt, petroleum, and other minerals. Lignite is also found, and it is believed that excellent coal exists in inexhaustible quantities.

The mining law of Santo Domingo was promulgated in the year 1876, and is No. 1,540 in the collection of laws of the Republic. Under this law all minerals underground are declared to belong to the State, by which concessions may be granted to discoverers, after fulfilling certain legal formalities and making arrangements with the owners of the surface.

URUGUAY.

This country appears to abound in mineral wealth, including gold, silver, lead, copper, antimony and coal ; but the mining industry is as yet quite undeveloped.

See "The
Gold Fields
of Uruguay."

URUGUAY—*continued*.

This country, having formerly been subject to Spain, and more recently to Brazil, has no doubt at successive periods been subjected to the mining legislation prevailing in the rest of the States in South America formerly under Spanish dominion and in Brazil respectively.

The mining law of Uruguay is now embodied in a code which was promulgated in 1884. This code (in 182 Existing Mining Law. articles) to a great extent resembles the Mexican Code of 1884, but in some respects differs from and is altogether more simple and concise than the Mexican Code.

The *mines*, which are defined to comprise all minerals, except silicious, magnesian, and aluminous earth and stones, &c., and in general all substances used for building and ornamental purposes, are declared to be the property of the State, but may be acquired by private persons by the means prescribed in the code, which are the usual means of discovery in the case of new mines, and denunciation in the case of abandoned mines. The working of auriferous and tin-producing sands and of all other mineral productions of rivers, brooks, and placers, are declared to be free when found in unoccupied ground of any dominion or ownership, but if the works are carried on in fixed establishments, mining concessions must be constituted (Arts. 1-5). All loose stones and precious metals found on the surface of the ground belong to its first occupant, provided that such ground is not within the limits of a mining concession (*pertenencia*).

A mining property is declared to be a solid of square, rectangular, pentangular, or hexangular base, as chosen by the interested party, and of indefinite depth within the vertical plane of its sides. The latitude of the rectangle must be equal to or greater than the third of its longitude. The sides of the pentagon and hexagon must be regular (Art. 28). The discoverer of a new mine, not within five kilos of any known mine, has a right to a mining property of 60 hectares of surface (Art. 29).

The discoverer of a mine within five kilos. of a registered mine has the right to a mining claim of 36 hectares of surface (Art. 30). In the case of alluvial deposits, coal and fossil mines, the area of the mining property is to be triple that of the properties previously mentioned (Art. 31). The first discoverer of a mine is preferred, though others may have investigated the site before. In case of doubt as to who was the first discoverer, the first to register the mine will be considered the discoverer, unless fraud is proved; but a person who discovers a mine whilst executing mining works for another is not to be considered as its

URUGUAY—*continued.*

discoverer, but in such case the person in whose name the works are being executed is to be considered its discoverer (32-3).

Mines may be abandoned by declaration to the Attorney-General, and proceedings analogous to those relating to concessions (Art. 48), and rights over a mine are forfeited by desertion in the usual manner, but forfeiture may be saved for four years by payment of a small sum per hectare, to be fixed by the Inspector-General every three years (Arts. 50-7).

Persons registering or denouncing mines must perform certain specified work on the mine within 120 days, under the risk of losing all rights to the mine (Arts. 66-70).

Concessionnaires must pay a "mining duty" equal to one-half per cent. on the gross product of the minerals worked (query manufactured) in the country, and one per cent. on the gross product of those exported in their natural state; and a further (customs) duty of one-half per cent. on the gross product will be charged on minerals and metals exported from the Republic (Art. 166). Contentious jurisdiction is exercised by the ordinary tribunals, in accordance with the code of civil procedure.

**Mining
taxes.**

VENEZUELA.

The mineral resources of Venezuela, though not extensively developed, are undoubtedly great, especially in that district of the State of Bolivia which formerly constituted the Yuruary district, and comprise gold, silver, copper, iron, tin, quicksilver, precious stones, coal and petroleum.

The mining legislation of Venezuela was formerly similar to that of the other States under the dominion of Spain; but since the establishment of independence it has entirely freed itself from such legislation, and has passed many new and elaborate laws on the subject of mines.

History of the Mining Law. The existing code, which was promulgated in 1891, contains some special features, and will therefore be treated in some detail.

The present Mining Law. The classification of minerals, being altogether special, may be here given in tabulated form as follows:—

Classification of minerals.

CLASSIFICATION OF MINERAL SUBSTANCES.

Minerals and mineral property	Ownership	To whom taxes or royalties payable	Remarks
<p><i>Mines, i. e., every accumulation of inorganic metal-liferous substances, or of combustible matter, deposited on the surface or in the interior of the earth, or of precious stones admitting of regular mining work.</i></p> <p>Precious metals and stones not admitting of regular mining work, when found on the surface of lands which do not belong to private owners.</p> <p>Building stones, sand, slates, &c., and all other material of this kind.</p> <p>Auriferous and tin-bearing sands and all other mineral productions of rivers and placers, as well as the coal called <i>de greda</i>, found in vacant lands or in lands belonging to the nation and unappropriated.</p>	<p>In concessionaire from the State, whose property begins at fifteen metres from the surface and continues to an indefinite depth. The concessions are made for ninety-nine years, which may be extended.</p> <p>In the first occupant.</p> <p>In the owner of the land.</p> <p>Open to free public use; but if the working is in permanent establishments, the workings must be the subject of special concessions.</p>	<p>To the Government, viz., two per cent. of the gross yield of the mine.</p>	<p>Mining Code of 1891 (Secs. 1-7).</p>

VENEZUELA—*continued.*

No mine is to be worked even by the owner of the soil without a concession (sec. 6). The concessions of mines are to comprise not less ground than one hectare or more than 200, and are not to be made for more than ninety-nine years or less than fifty. In the case of coal mines the number of hectares may be three times as large as in other cases (sec. 7). The soil begins at the surface and extends down fifteen metres, from which point the mine extends to an indefinite depth (sec. 8). The grant of a mine constitutes it a separate real property capable of transfer, but not in lots without the permission of the Federal executive. If the concessionnaire cannot exhaust his vein during his term a further term is to be granted, which may extend to ninety-nine years on proof that the mine is unexhausted and ought to be continued (sec. 12).

The patent to a mining property does not convey in any way the ownership of the soil, but renders it obligatory on the concessionnaire before working to acquire such ownership. If the land belongs to private parties it is optional for them either to sell to the miner or to associate with him in his mining enterprise, in which case their interest is to be represented by the value of their property; in both cases the value is to be appraised in the manner provided by law (sec. 15). The patents or titles are to be recorded at the registry of the locality where the mining property is situate, and also at the department of *Fomento* (sec. 18).

Relations between
concessionnaires
and owners of
surface.

The provisions as to searches are in the main similar to those of the existing Mexican code, but it is specially provided (sec. 22) that no search is to be made within the limits of a concession, except by the permission of the concessionnaire, having for its object the discovery of mines of the same class.

Searches.

Every person capable of owning real estate in Venezuela, and any companies, native or foreign, can acquire the ownership of mines with the exception of the Government mining officials (sec. 28). No person is to acquire as discoverer or denouncer more than one concession in a mining district, but in all other capacities he may acquire as many mines as he likes (sec. 30). Joint-stock companies whose domicile is situate outside Venezuela must fulfil before commencing work all the requisites provided for in section 224 of the Code of Commerce, and to constitute a lawful agent or attorney who is to represent them in the country, which appointment must be registered (sec. 32). Mortgages on mines must also be registered (sec. 34). In case of opposition to the granting of concessions preference is to be given (1) to the

VENEZUELA—*continued.*

discoverer, (2) to the owner of the surface, (3) to the applicant who shows that he has sufficient capital to carry on the work (sec. 39). The discoverer is bound to make within six months sufficient works to show the nature and other particulars of the mine (sec. 41), and to file maps of the mine, &c. (sec. 43), and concessionnaires must commence to work the mine (in a permanent manner) within five years from the date of their patents under penalty of a fine of 2,000 bolivars (=about £80) and forfeiture of the concession if the mine remains unworked for a second period of five years (sec. 56). Concessionnaires who suspend work at a mine for two consecutive years incur the penalty of a fine of 10,000 bolivars and forfeiture if the mine continues unworked for a second period of two years (sec. 60). A strict system of mining inspection and regulation is also established (secs. 73-99). All old concessions were bound to be renewed under the new law at the risk of forfeiture (secs. 100-7).

CHAPTER XVIII.

NOTES ON MINING LAW OF INDIA, THE COLONIES,
AND BRITISH POSSESSIONS.

THE following is a short statement as to the minerals which are found in India and the different Colonies, and as to the laws which govern the ownership and regulate the working of such minerals. This statement, without attempting to cover the whole ground, will at any rate afford some indication of the variety of legislation which exists with reference to the subject matter, and may serve as an index to such legislation. Every possible effort has been made to bring the revision of these notes up to date; but it must be observed that the progress of legislation in some of the Colonies on such a subject as that which is here dealt with is so rapid, that considerable difficulty has been experienced in keeping pace with the constant change of laws and regulations bearing on it.

As many of the laws and regulations respecting mining in the Colonies have reference particularly to mining for gold and silver, it may be here observed that grants by the Crown (or Government) of land in the Colonies (as in England) will not pass *gold or silver* mines therein unless an intention to transfer them is expressed or necessarily implied (*Woolley v. Attorney-General of Victoria*, 2 App. Cas. 163; and *Attorney-General of British Columbia v. Attorney-General of Canada*, 14 App. Cas. 295). The notes in the 3rd column of the tables as to the ownership of the mines, must, therefore, usually be taken as applicable only to mines other than gold and silver. This constitutes an important difference between the position of the owners of *private lands* in the Colonies and in the United States of America, where, as before observed (p. 161), the common law right of the Sovereign to the precious metals has been waived. It may also be observed that whilst in the early days of the Colonies it was common for grants in fee simple to be made without reservation of minerals, there has been a tendency of late years, as the mineral resources of the Colonies have become developed, to provide for the reservation of minerals in Crown grants of land. It must also be understood that the notes as to the ownership of mines given in this statement generally have reference to lands which have been alienated by the Crown, and which are here called "private lands," and not to the waste, unoccupied, and uncultivated tracts

of land, or to the specially reserved mining districts, which in many of the Colonies still remain unalienated in the Crown, and which are here termed "Crown lands"; and it will be seen that the legislation as to mining in the Colonies is usually applicable to Crown lands alone, the incidents of ownership of minerals in private lands in the Colonies being usually governed by the same principles as are applicable to the ownership of minerals in England.

ASIA.

Name	Minerals	Ownership	Remarks
CEYLON . . .	Plumbago Iron A little coal Precious stones	<i>In surface-owner</i> (except where there has been a specific reserva- tion to the Crown)	No one is permitted to <i>gem</i> on Crown lands without license. (Ceylon Ordinance No. 7,1882, and see below). There do not seem to be any acts or regulations relating to mines of coal or metals.

By "The Gemming Ordinance, 1890" (1890 No. 5), no person is to open, work, or use any mine of gold, silver, gems, or precious stones without a license from the Government, which is to be subject to a stamp duty of five rupees, and may be granted to any person establishing a *prima facie* right to enter on, open, work, and use a mine on any land (the word land being defined to mean every description of land not being the property of the Crown). Licensees may not, however, employ any person in or about a mine without a written permit under the hand of the Government agent, for which a fee of 75 cents. is to be paid, and which shall be in force only for the current quarter in which it is issued (s. 8).

Import duties are charged in Ceylon on various metals, *e.g.* :—

	Rs. cts.
Iron, pig, per ton	2.50
„ bar, flat, &c.	4. 0
„ angle, &c.	5. 0
„ corrugated	7. 0
„ galvanised	15. 0
Copper sheathing, per cwt.	3. 0
Lead, sheet, pipe, and pig, per ton	10. 0
Spelter, tin and zinc	10. 0
Tin plates, per cwt.	0.75

Ore-crushing or machinery, railway rails, and machinery of various descriptions are, however, admitted free.

An export duty is charged on plumbago per cwt. of 0.25.—*Return of Colonial Tariffs presented to Parliament June 1891.*

ASIA—continued.

Name	Minerals	Ownership	Remarks
CYPRUS . . .	Silver Copper &c. ¹	<i>In Crown</i>	Under Cyprus Ordinance No. 5 (amending Ottoman Law dated 4 Mouhareem, 1286), being regulations as to mines and metallic substances, and the granting of concessions and licenses to search for, win, work, and get the same.

The mining law of Cyprus is similar to that of Turkey (see p. 156).

The Cyprus Ordinance No. 5, above mentioned, enacted (*inter alia*):

1st. That concessions should be under the hand of the High Commissioner and the Seal of Cyprus instead of an Imperial Iradé.

2nd. That the High Commissioner in Council might suspend the provisions of the regulations of the Ottoman law providing for payment of a fixed surface rent.

3rd. That the rents and royalties payable to Government should be paid into the Island Treasury.

¹ The following extracts from The Cyprus Guide, by Lieut. H. M. Johnstone, R.E., bear witness to the importance of the mineral deposits which have been found, or which still exist in Cyprus.

"Cyprus abounds in metals, the most important of which is copper. Copper mining has been carried on in remote ages as early, it is said, as the time of the Trojan war. Heaps of scoræ in many parts of the island bear witness to the magnitude of the mining operations which have been undertaken at different periods of the island's history. So enormous are some of these heaps that the natives will not believe that they are the work of man, but imagine that they are the result of earthquakes, volcanoes, or some such convulsion of nature."

"For many years copper mining has been abandoned in Cyprus, but since the occupation concessions for mining have been made to an English firm. . . . The royalty paid to Government for copper mining is five per cent. on every ton of copper extracted, the minimum amount being £500 a year, which has to be paid however small the amount of mineral procured."

"Iron abounds in Cyprus. . . . It does not appear to have been ever mined in Cyprus, and there is no likelihood of its being undertaken at the present day."

"Manganese exists in Cyprus, but it is not worked."

"Ochre, or 'terra umbra' as it is called, is met with in large quantities."

"Asbestos is found in the mountains, but it is not worked."

ASIA—continued.

Name	Minerals	Ownership	Remarks
INDIA:			
Bengal . .	Coal ¹ and other minerals in large quantities	The right to mines, &c., in <i>unalienated lands</i> has been reserved <i>to the Government</i> from recent dates in various provinces. In the case of lands previously alienated by the Government in those provinces and in the case of the other provinces (without special reservations), the mines belong to the <i>surface-owner</i> ²	<i>See the Anglo-Indian Codes —Whitley Stokes (1887), vol. i. p. 727.</i>
Assam. . .	Limestone, some coal and iron		
N. W. Provinces and Oudh	Some iron, but no minerals of importance		
Ajmer. . .	Lead, copper, iron		
Punjab . .	Rock-salt, some coal of poor quality		
Central Provinces	Coal and iron		
British Burma	Tin, petroleum, some iron		
Madras . .	Gold, iron, &c.		
Mysore . .	Gold		
Bombay . .	Some iron, but no mines of importance		

¹ There were 105 collieries in Bengal in the year 1887, of which 62 were worked during that year, with a total output of 1,319,090 tons, as compared with 1,186,802 tons in 1886.

The total yield of all Indian coal-fields was 1,560,393 tons in 1887.

In the Bengal coal-field collieries are worked entirely by companies and other private owners.—("Moral and Material Progress and Condition of India, 1887-8.")

² The position is clearly explained in the evidence given by Sir Charles E. Bernard to the Mining Royalties Commission, showing that in the permanently-settled districts—that is to say in Bengal, in part of the North-West, and in part of Madras—the property in the minerals is vested in the owner of the surface; in other parts of Madras the small surface-owners have also been recognised to be the owners of minerals, but in the latter case, when the minerals are worked the owners are bound to pay an extra land tax of 5 rupees an acre to the Government. In other parts of British territory and in Native States the minerals belong to the State. Even in cases where the minerals belong to the owner of the surface, the Government, having power to acquire or expropriate land for public purposes (either with or without mines), on making full compensation in the manner provided by the Act, may, and has, exercised this power for the purpose of acquiring and letting coal mines to a public company. (*See evidence and copies of the Land Acquisition Act, 1870, and the Land Acquisition (Mines) Act, 1885, published in the Third Report of the Mining Royalties Commission.*)

New Rules as to Prospecting Licenses and Mining Leases on Crown Lands in India are about to be issued; but at the date of publication of these Notes no copy of the Rules as finally settled has come home.

ASIA—continued.

The total yield of Indian coal has, during the past few years, increased as follows, viz. :—

In 1886	.	.	.	.	1,389,000 tons
„ 1888	.	.	.	.	1,708,000 „
„ 1889	.	.	.	.	2,045,000 „
„ 1890 ¹	.	.	.	.	2,168,000 „

During the same period the importations of coal by sea have decreased from 849,000 tons in 1886 to 605,000 tons in 1889, but rose in 1890 to 784,000 tons; of this, the bulk came from England, while 12,014 tons came from Japan, and 10,017 tons from Australia.—(“Moral and Material Progress and Condition of India, 1890–1.”)

In Bengal.—The road cess is to be levied on *mines*, amongst other property.—(Bengal Act IX. of 1880, sec. 6.)

In the Central Provinces.—Unless it is otherwise expressly provided in the records of a settlement, or by the terms of a grant made by the Government, the right to all mines, minerals, coals, and quarries, and to all fisheries in navigable rivers, shall be deemed to belong to Government, and the Government shall have all powers necessary for the proper enjoyment of such rights.

Provided that whenever in the exercise by the Government of the rights herein referred to over any land the rights of any persons are infringed by the occupation or disturbance of the surface of such land, the Government shall pay to such persons compensation for such infringement, and the amount of such compensation shall be determined as nearly as may be in accordance with the provisions of the Land Acquisition Act, 1870.—(The Central Provinces Land Revenue Act, 1881, sec. 151, as since amended—see the Central Provinces Code, 1891, p. 165.)

In Bombay.—Mines and minerals in all unalienated lands to be reserved to Government (subsisting rights of occupants not to be affected).—(Bombay Code, Act No. 5 of 1879, sec. 69.)

In the Punjab.—All mines of metal or coal and all earth-oil and gold-washings shall be deemed to be the property of Government, and the Government shall have all powers necessary for the proper enjoyment of its right thereto; but if, in the exercise of any such rights, the rights of any person are infringed by the occupation or disturbance of the surface of any land, the Government shall pay or cause to be paid to that person compensation for the infringement, such compensation to be determined as nearly as may be in accordance with the provisions of the Land Acquisition Act, 1870.—(Punjab Code, Act No. 17 of 1887, secs. 42 & 43.)

In Ajmer and Merwára.—Except in the case of lands in respect of which *istimrári sanads* (perpetual grants) have been granted by the Chief Commissioner with the previous sanction of the Governor-General in Council, the Government shall be presumed, until the contrary is proved, to be the sole owner of all mines, opened and unopened, of metal, coal, and

¹ The following figures show later increases :—

In 1891	.	.	.	.	2,229,400 tons
„ 1892	.	.	.	.	2,537,690 „

ASIA—continued.

other valuable minerals, with full liberty to search for and work the same. Compensation to be made for damage caused to the surface-owner; the amount to be determined by the revenue officer.—(Ajmer Land and Revenue, Reg. II. of 1877, sec. 8 (A).)

In British Burma.—A landholder shall have a permanent heritable and transferable right of use and occupancy in his land, subject only

- (a) To payment of revenue taxes, cesses and rates, &c.
- (b) To the reservation in favour of Government of all mines and mineral products, and of all buried treasure, with full liberty to work and search for the same, paying to the landholder only compensation for surface damage as estimated by the revenue officer.—(British Burma Code, Act No. 2 of 1876, sec. 8.)

Rules have been made as to working the tin deposits in the *Mergui* district (where a great development of such deposits is taking place) which came into force on the 1st of August, 1890, under which prospecting licenses available for 12 months and leases for terms not exceeding 21 years may be granted by the Deputy Commissioner, and no tin deposits are to be worked or tin prepared or made marketable except under such a lease or license. Annual rents of Re. 1 per acre and a royalty of Rs. 3 the pical (188 lbs.) on all tin smelted are to be paid by the lessees, who are also to be subject to the labour and other conditions set out in the form of lease attached to the rules.

Name	Minerals	Ownership	Remarks
UPPER BURMA	Precious stones	In Crown, unless otherwise provided by grants	The Upper Burma Land and Revenue Reg., No. 111 of 1889.

The Upper Burma Land and Revenue Regulation (No. 111 of 1889) provides (s. 31) : 1. Save as otherwise provided by the terms of any grant made or continued by or on behalf of the British Government, the right to all precious stones, mines, minerals, coal and earth-oil shall be deemed to belong to the Government, and the Government shall have all powers necessary for the proper enjoyment of its right thereto. 2. Whenever in the exercise of any such right of the Government, the rights of any person are infringed by the occupation or disturbance of any land, the Government shall pay or cause to be paid to that person compensation for the infringement. 3. The compensation shall be determined as nearly as may be in accordance with the provisions of the Upper Burma Land Acquisition Regulation (IX.) of 1886.

Under the last-mentioned Regulation the amount of compensation, in case of dispute, is to be determined by the Deputy Commissioner of the district, after hearing the parties interested.—(Burma Code of 1889, p. 406.)

ASIA—*continued.*

"A seven years' lease of the Government monopoly of rubies has been granted. The terms of the lease and the regulations concerning the mines safeguard the rights of the ruby mines' residents to work their claims on the old system, and to have new claims as long as they pay the prescribed royalty on all rubies and sapphires they raise."—("Progress and Condition of India, 1887-8.")

Concessions have been granted to two companies for working coal over six square miles of the Chindwin field in Upper Burma, on condition that the industry makes satisfactory progress during the next eighteen months. The royalty on this coal is to be four annas per ton.—("Moral and Material Progress and Condition of India, 1889-90.")

Name	Minerals	Ownership	Remarks
LABUAN. . .	Coal.	In Crown, except as to lands granted to the Labuan Coal Company, and other lands granted prior to 1849.	By an arrangement with Her Majesty's Government, which came into force 1st January 1890, the administration of the Colony of Labuan was transferred from the Colonial Office to the British North Borneo Company (as to which see p. 239 post).

All land in this country is now leased by the Government for 999 years, subject to the reservation of coal and other minerals to the Crown, its grantees, lessees, or licensees.—(Labuan Ordinance No. 2 of 1863.) This Ordinance has been repealed (as regards Labuan) by the Labuan Ordinance No. VIII. of 1891, but similar provisions as regards mines are re-enacted by the last-mentioned Ordinance.

The Labuan Coal Company have certain rights to purchase lands in fee-simple which are reserved by the last-mentioned Ordinance. Prior to an Act passed in 1849, the grants of land were made without reservation of minerals or royalties to Government; but in the case of lands held under grants made between 1849 and 1863, the coals and minerals are to be held subject to a royalty to be fixed by the Governor.

ASIA—continued.

Name	Minerals	Ownership	Remarks
STRAITS SETTLEMENTS :— Singapore Penang	There does not appear to be any mineral production in the Straits Settlements proper, except in Malacca.	Apparently in surface-owner, subject to the payment of a royalty to the Crown in the case of lands granted by the Crown since 1886.	All grants of Crown Lands made under the Straits Settlements Ordinance No. 2 of 1886 are (in the absence of an express provision to the contrary) to be subject to the payment to the Crown of a royalty of 10 percent. of the gross produce of all mines and minerals, other than laterite, found in or upon such land.
Malacca . .	Gold and tin.	Apparently in the surface-owner, in the case of lands granted by the Crown before 1886, and in the case of lands granted since that date.	By the Ordinance No. IX. of 1886 (applicable only to Malacca), it is declared that all mines and mineral products, and all buried treasures, with power to work and get the same, making compensation for damage, are reserved to the Crown.

The Straits Settlements Colony is formed of a number of settlements, of which the principal are Singapore, Penang, and Malacca. In order to understand the tenure of land in these settlements the following remarks (taken from the Straits Settlements Blue Book, 1890) may be found useful.

SINGAPORE.

Land in the hands of private owners in Singapore is held direct from the Crown, either by lease or grant. The terms of the leases vary. A great

ASIA—*continued.*

portion of the land on which the town stands is held on building leases for 60 and 99 years. The terms of leases in the country are for the most part 99 and 999 years. The quit-rent reserved in leases for land in the country issued before October 15, 1883, is 30 cents per acre; on land leased since that date it varies according to the advantages of the land as to situation, soil, &c., but is in no case less than 40 cents an acre. In all leases issued since October 15, 1883, a condition under which the quit-rent is re-adjustable every 30 years is inserted. Since the passing of the "Crown Lands Ordinance, 1886," the only instrument of title is a statutory grant in perpetuity, subject to a minimum quit-rent of 50 cents per acre re-adjustable every 30 years. The extent of land alienated in fee simple before 1871, which pays no revenue to the Crown, is considerable.

PENANG.

Land in Penang and Province Wellesley is held of the Crown as in Singapore, by grant or lease. The conditions of tenure vary according to the policy of the Government at the time the documents were issued respectively (in Singapore 18, in Penang 20 different kinds of title are in the hands of the public). The rates of rent reserved in old leases vary in different districts. Unoccupied Crown land is obtainable on statutory grants in perpetuity, premium and quit-rent being fixed according to the advantage of locality, soil, &c.

MALACCA.

The tenure of land in the town of Malacca has remained unchanged since the days of Dutch rule. Possession is evidenced in many cases by documents of title in Dutch. Occupied land in the country is in some cases held either under grant or lease from the Crown, but for the most part under customary tenure as defined by the Malacca Lands Ordinance. Land is now obtainable without premium if held under customary tenure, and with premium and a moderate quit-rent if under statutory grants.—*The Straits Settlements Blue Book*, 1890.

Native Settlements of the Malay Peninsula under British influence.

Closely connected with the Straits Settlement Colony proper are the following protected Native Settlements of the Malay Peninsula, the laws in which, administered by native sultans or chiefs assisted by British residents, are of importance owing to the extensive development of mining enterprise in these settlements, and having regard to the numerous and special regulations which have been recently adopted in these settlements in connection with such development.

ASIA—continued.

Name	Minerals	Ownership	Remarks
MALAY PENIN- SULA STATES:—			
Perak	Some gold and coal, &c., and much tin.	In Government, where grant of land made since date of recent regulations re- ferred to below; but in case of older grants and of native custom- ary holdings, pro- prietary rights in minerals fre- quently belong to surface-owners.	See the various regula- tions referred to be- low.
Pahang			
Jelevu			
Negri			
Sembelan			
Selangor			
Sungei			
Ujong			

PERAK.

By the General Land Regulations Amendment 1891 (Perak) the right to all mines and mineral products, coal, petroleum, road materials, and quarries, under or within any land granted or leased, is reserved to Government, with full liberty for the Government and its assigns to search for and work the minerals, &c., on payment of compensation on account of disturbance or surface damage, such compensation to be determined in accordance with the law for the acquisition of land for public purposes. Road materials, &c., may be taken by Government on paying compensation for damage to crops, buildings, &c. This Order was to come into force on October 1st, 1891. (*See* Order No. 6 of 1891, published in Government Gazette (Perak) of September 30th, 1891.)

Mining for tin in Perak has greatly developed within the last 10 years, chiefly through encouraging Chinese immigration.

Prospecting licenses are given for \$25 for six months over areas not exceeding 320 acres.

Permits to mine are given (annual fee \$2), to dig for tin over areas of five acres.

Mining leases for 21 years, not exceeding 25 acres in one block, or more in special cases. Lessee bound to open and work and employ a certain number of miners without intermission, and to pay export duties; also to pay fees, including an annual quit-rent of \$1 per acre. The export duty is equivalent to 10 or 11 per cent. on the value of the metal. (*See* "Report on Tin Mining in Perak and in Burma," W. T. Hall; and "Preliminary Sketch of Tin Mining in Perak and in Burma," T. W. H. Hughes, Superintendent Government Survey, India, January 1889, and by the latter, August 1889.)

ASIA—*continued.*

Amended and much more detailed mining regulations for Perak have been under consideration, a draft of which was published in the Perak Government Gazette of September 25th, 1891.

PAHANG.

Under the Pahang General Land and Mining Regulations, dated December 31, 1889, lands available for agricultural purposes are held from the Crown on grant or lease, subject to the reservation of all minerals, together with the right of digging, and taking the same to the State. All districts in which metals or minerals were then being worked, or might thereafter be discovered, are to be treated as mining reserves, and subject to the provisions of the State Mining Regulations.

Similar conditions appear to apply to land in the occupation of natives under Malay tenure, of which leases in perpetuity may be obtained on compliance with certain conditions as to registration and survey.

All districts in which metals or minerals were being worked at the date of the issue of the regulations, or in which metalliferous deposits might thereafter be discovered, are to be subject to the provisions of the State Mining Regulations in addition to the General Land Regulations.

The Pahang State Mining Regulations, dated December 31, 1889, provide for the granting by the Government of:—

1. Mining licenses, which entitle holders to search for gold or other metals or minerals within certain specified areas for the space of one year (renewable) on payment of certain prescribed fees.

2. Mining leases of areas not exceeding 250 acres for terms not exceeding 25 years (renewable), the royalties reserved by Government being 5 per cent. on gold, 8 per cent. on tin, and 10 per cent. on any other metal or mineral. The royalties are apparently calculated on the value of mineral exported. The leases entitle the holder to mine within certain specified areas subject to prescribed conditions.

3. The Regulations also provide that in the case of persons or companies holding concessions for prospecting or mining granted by the Sultan of Pahang before the date of those Regulations, certain particulars were to be furnished to the Government, who would then replace the concessions by leases.

All leases are subject to labour conditions, providing for continuous and effective working, and to provisions for forfeiture in case of discontinuance of work without exemption by the mining department.

All documents of title must be registered, and transfers are permitted on registration and payment of small fees.

No document of title granted to a miner confers any proprietary right to the land included within his prospecting or mining area, but merely permission to search for metals and minerals, and to utilise roads, waterways, timber and other materials, and the surface of the land for buildings or other purposes connected with prospecting or mining, in accordance with the provisions of the Regulations (s. 62).

The Government reserves right to take land for public purposes on payment of compensation (s. 63).

ASIA—*continued.*

Any occupied land may be mined upon with the consent in writing of the District Collector, provided that compensation is made beforehand to the occupant for all loss, damage, or injury that may be sustained by him in consequence thereof, the amount of compensation being determined by the District Collector (s. 66).

JELEBU.

By the Jelebu Land Regulations (recently issued), lands available for agricultural purposes may be taken on lease for various terms of years according to the purposes for which they are taken, subject to the reservation to Government of all minerals, together with the right to enter upon and resume such portions of land as may be necessary for working mines, upon payment of just compensation to the lessee for any surface damage actually sustained by him, but the lessee will have priority of right to work minerals on the terms in force for the time being.

No such reservation, however, appears to be made from land in the occupation of natives under Malay tenure, of which leases in perpetuity may be obtained on compliance with certain conditions as to registration and survey.

Tracts known to contain metalliferous deposits, for which no lease or other sufficient title shall have been given, are to be considered as Government reserves, and mining licenses and leases may be obtained of lots included in such reserves on payment of certain specified fees, and subject to certain specified conditions. Such leases are to convey no property in the land, but merely to remove the metal on payment of the duty in force for the time being.

NEGRI SEMBELAN.

By the Negri Sembelan Land Regulations, dated 2nd October 1887, land available for agricultural purposes may be held on grant in perpetuity subject to the reservation of all minerals by the State, together with the right of digging and taking the same.

A similar reservation (subject to the right of the landholder to compensation for damage) applies to land in the occupation of natives under Malay tenure, who are to be deemed to have a permanent heritable and transferable right of occupancy in such land, subject to certain specified conditions.

Tracts known to contain metalliferous deposits, for which no sufficient title should have been issued at the date of the Regulations, are to be considered as Government reserves, and mining licenses and grants may be obtained of lots included in such reserves on payment of certain specified fees, and subject to certain specified conditions. Such grants are to convey no property in the land, but merely permission to remove the metal on payment of the duty in force for the time being for tin, or, in the case of any other metal, of one-tenth of the produce.

SELANGOR.

By the Land Regulations of Selangor, contained in Regulation III. of 1891 (passed by the State Council of June 18th and to be cited as "The

ASIA—*continued.*

Land Code, 1891," as amended in 1892), all grants of waste land made after the commencement of the Regulations are (in the absence of any express provision to the contrary) to be subject to a reservation to the State of a royalty of 10 per cent. of the gross produce of all mines and minerals found in or upon such land, such royalty to be ascertained and paid in the manner prescribed by rules made under the regulation.

Customary landholders are to be deemed to have a permanent transmissible and transferable right of use and occupancy in their land, subject to certain reservations, including the reservation in favour of the Government of all mines and mineral products and of all buried treasure, with full liberty to work and search for the same, paying to the customary landholder only compensation for surface damage as assessed by the District Officer.

The Resident may grant licenses to search for and remove minerals or metals from waste lands (defined as meaning all lands in Selangor not being customary land, which may not have been reserved for or dedicated to any public purpose, or which have not been granted or leased or agreed to be granted or leased to any person), or from any lands in respect of which the right to minerals and metals is reserved to the State, or may lease the same in blocks not exceeding 200 acres for the purpose of mining for any minerals or metals upon certain specified terms and conditions. Provision is also made for the appointment of inspectors of mines who may hear and determine in a summary way disputes between the holders of mining licenses, either amongst themselves or between themselves and third parties, relative to their mining rights.

Under "The Land Acquisition Regulation, 1893," land or mines can be taken for public purposes after due notice, and on payment of compensation.

SUNGEI UJONG.

By the Sungei Ujong Land Regulations (recently issued), land available for agricultural purposes may be held on a lease in perpetuity, or for 999 years, subject to the reservation to Government of all minerals, with the right to enter on and resume such portions of land as may be necessary for examining or working mines, upon payment of just compensation to the lessee for any damage sustained by him, but the lessee, his administrators, executors, or assigns, are to have the priority of right to work minerals on the terms in force at the time being.

No such reservation, however, appears to be made from land in the occupation of natives, of which leases in perpetuity may be obtained on compliance with certain conditions as to regulation and survey.

The rules as to mining reserves seem to be similar to those enacted under the Jelebu Land Regulations before referred to.

ASIA—*continued.*

Name	Minerals	Ownership	Remarks
NORTH BORNEO AND SARAWAK	Gold, coal, &c.	All coals, minerals, precious stones, and mineral oils are re- served to the British North Borneo Com- pany, from the leases (which are made for the term of 999 years)	Land Regulation of the British North Borneo Company (approved by the Court of Directors, 7th February 1883 and amended 22nd January 1890).

British North Borneo is administered by the British North Borneo Company, to whom a Royal Charter was granted on the 1st November 1881; and in the year 1890 the administration of the Colony of Labuan (*see* p. 232 *ante*), was transferred from the Colonial Office to the same Company, whose territories together with Sarawak and the native State of Brunei have since the year 1888 been under a British protectorate.

Mining licenses will be granted on favourable terms to the lessees of demised lands (s. 10).

The Labuan Ordinance of 1868 was extended to North Borneo, but as regards that country has been repealed by the British North Borneo Regulation (No. 2 of 1885) except as regards rights accrued under it, and by such last-mentioned regulation new provisions are made for the leasing of lands subject to the reservation of minerals, &c., with the right of entering on payment of reasonable compensation for surface damage and for damage to buildings; and the Government may grant mining licenses on favourable terms to the lessees of demised lands.

AFRICA.

Name	Minerals	Ownership	Remarks
CAPE COLONY .	Gold Precious stones Copper Iron Coal, &c.	<i>In the surface-owner, unless specially reserved to the Crown: and, even where the mines have been reserved to the Crown, the surface-owner is entitled to receive one-half of the license moneys, rents, or royalties collected by the Government. (Act No. 19 of 1883, sec. 33.)</i>	The laws relative to the prospecting and mining of minerals within the Colony on Crown lands, or on quit-rentlands, where the mines have been reserved to the Crown, are the C. of G. H. Acts, No. 19 of 1883, No. 22 of 1885, No. 18 of 1886, No. 44 of 1887, No. 10 of 1888, and No. 12 of 1889.

Where the mines are not reserved to the Crown, the owner of any private property (not subject to a reservation of minerals) on which diggings or mines are proclaimed is to pay 10 per cent. of any rents or royalties received by him to Government for the maintenance of order and good government and protection of life and limb within his mining district.—(Cape of Good Hope Act, No. 19 of 1883, sec. 77.)

Where the mines have been reserved to the Crown, the owner of the surface has special privileges with respect to the mines, *e.g.*, he may prospect without license, refuse consent to licensed persons to prospect on his land unless it is situate in a properly constituted "mining district," in which case also he has special privileges, including the right to claim certain portions of the mine free from Crown royalty.—(Cape of Good Hope Act, No. 44 of 1887, sec. 5.)

The license fees for prospecting and for pegging out and working claims on *Crown lands* are 2*s.* 6*d.* per month, which also entitle the owner of any claim to a residence area of not more than 50 feet square, without additional payment. Claims may be declared abandoned if the license fees, rents, royalties, or transfer fees (2*s.* 6*d.* per cent.) are in arrear for thirty days, or if they shall be proved to have been unworked, in the case of reef claims, for thirty days, and, in the case of alluvial claims, for fourteen days, without leave.

AFRICA—*continued.*

The Governor may grant leases of *Crown lands* containing mineral deposits, for such terms as he may direct, at a ground rent of 5s. per morgen, and a royalty not exceeding 10s. per ton of ore raised.

Name	Minerals	Ownership	Remarks
BASUTOLAND	—	—	Apparently native chiefs have power to make regulations, and at present permission to search for minerals and precious stones is refused. (Report of Resident Commissioner for 1889, Colonial Office Reports, 1890, No. 70.)
BRITISH BECHUANALAND	Precious stones Gold Silver Platinum	As in Cape Colony	Provisions for prospecting licenses and leases of minerals, under Proclamation of Sir Hercules Robinson, 25th April 1889 (63 B.B. 1889), since partly repealed by Proclamation of Sir H. B. Loch of 26th March 1891 (102 B.B. 1891).

The prospecting licenses do not give any right to prospect on private property without the consent of the owner of such property, and the person prospecting has in any case to give security to make good surface damage. The Proclamation only applies to gold, silver, and platinum. As regards precious stones, Division I. of Act No. 19 of the Cape of Good Hope (of 1883) is in force throughout British Bechuanaland. —(See Proclamation, 63 B.B. 1889, above referred to.)

By the Proclamation of 1891 above referred to, the 71st and 72nd sections of the Proclamation of 1889 above referred to are repealed, and it is provided that if before the expiration of three months from the date of a written request to the Governor, setting forth that precious minerals have been found in payable quantities, signed by the owner of land in which the precious stones

AFRICA—*continued.*

and minerals have been reserved to the Crown, or his agent, or by any prospector duly licensed to prospect on such land, and asking that the said land shall be proclaimed a mining area, the Governor shall not proclaim such area, the owner of the land or his agent (subject to the rights of any prospector under section 41 of the Proclamation of 1889 above referred to) shall be entitled to receive a mining right lease of such land for not less than five or more than twenty years, at an annual rent of 10s. per morgen, subject to conditions as to keeping proper accounts of finds, and to the option of the Governor to demand $2\frac{1}{2}$ per cent. on the value of finds instead of the rent of 10s. per morgen, and to such other conditions as the Governor may deem necessary or convenient.

If the land, together with the rights of the owner in respect of precious minerals, has been leased by duly registered lease, the lessee, instead of the owner, has the right to receive such mining right lease as aforesaid.

Name	Minerals	Ownership	Remarks
GOLD COAST .	Gold	—	“Native chiefs may make laws regulating mines and mining for gold and other minerals.” — (Gold Coast Colonies Ordinance No. 5 of 1883.)
MAURITIUS . .	Traces of iron Lead Copper	—	There do not appear to be any special mining laws or regulations for Mauritius.
NATAL . . .	Coal Iron Silver-lead, &c.	In the case of lands granted before 1887, <i>in surface-owner</i> ; in the case of lands granted since that date, <i>in Crown</i>	By the (Natal) Act 17 of 1887, called The Natal Mines Act 1886, the right of mining for and disposing of all gold, precious stones and precious metals, and all other minerals in the Colony is thereby vested in the Crown, subject to the provisions of that Act, but the Act is not to affect rights previously acquired.

AFRICA—*continued.*

The Natal Act 17 of 1887 has been repealed by the Natal Mines Law, 1888 (No. 34 of 1888), but the provisions above referred to are re-enacted. Mineral leases may be granted by the Governor to any licensed person of any unalienated Crown lands for mining purposes (s. 22), and the Commissioner of Mines or other person appointed for the purpose may, on giving the prescribed notice, enter on private lands for the purpose of prospecting or boring for coal, making compensation to the owner or occupier of any such lands for any damages thereby occasioned, the amount of such compensation to be decided by the resident magistrate of the county or division (s. 30). The owner of any land on which coal is discovered may dig for, mine for, and dispose of such coal; or may grant leases to any person or persons for the purpose of mining for or disposal of such coal (s. 31). The owner has also the right to mine for gold or other precious metals or minerals on his land or to give permission for others to do so (s. 38), but if he neglects to do so the Commissioner of Mines may issue prospecting licenses for other persons to do so (s. 40). The owner of any land which has been proclaimed a public gold field has precedence in choice of claims, and one-half of the license-fees paid by other parties is to be paid over to him (s. 56). Discoverers of gold have also special privileges (s. 54). A royalty is payable to the Government in respect to all gold, silver, and precious stones found on any land not being a proclaimed gold field on gold of 1s. 6d. an ounce, silver 1s. per ounce, diamonds $2\frac{1}{2}$ per cent. ad val. (s. 64). On the proclaimed gold fields diggers must take out licenses of 10s. a month for each claim (s. 13). A prospector's license costs 10s. for every six months, and no one may search for gold or precious stones or metals or other minerals on Crown lands without such a license (s. 3).

Under the provisions of a law (N.S. No. 11, 1881), townships may be proclaimed in Natal with power for the Local Boards of such townships to acquire and hold lands, and to lease any portion of such lands by public competition for building for any period not exceeding fifty years, and for any other purposes for any period not exceeding twenty-one years. Under this Act the town of Newcastle was, in 1882, proclaimed a township, and the Local Board (since converted into a Town Council) of such township in 1889 and 1890 leased the right of mining for coal on portions of the town lands to certain persons for the period of twenty-one years. It has since been found that the development of the coal mines on the town lands was being retarded in consequence of the inability of the Town Council to give the lessees the option of renewal of their leases, and accordingly an Act has been recently passed (N.S. No. 8 of 1893) empowering the Town Council of Newcastle to grant to the lessees of the said coal mines the option of renewing their leases for further periods of twenty-one years, the rentals during the period of renewal being fixed, in default of agreement, by arbitration.

AFRICA—*continued.*

Name	Minerals	Ownership	Remarks
ST. HELENA AND ASCENSION	—	—	There do not appear to be any special laws or regulations as to mining in these colonies.
SIERRA LEONE .	There are no mines or quarries	—	Sierra Leone Blue Book, 1891.
ZULULAND . .	Gold . .	As in Natal (<i>see</i> above).	Proclamation of Governor, 1889, No. 2.

THE CHARTERED COMPANIES OF AFRICA.

Three important Associations have lately been incorporated by Royal Charter, and entrusted with powers of government or administration over large portions of Africa which had previously been declared to be "within the sphere of British influence," or over which a British protectorate had been established; and although the possessions of these Companies may not strictly come within the ordinary meaning of the term "English Colonies," it is proposed to treat them as such for the purpose of these notes, which would manifestly be incomplete without some reference to the land and mineral regulations of Companies to which has been entrusted the development of districts in Africa believed to be possessed of enormous mineral wealth.

The following are the Chartered Companies of Africa, viz. :—

The Royal Niger Company, incorporated in 1886.

The Imperial British East Africa Company, incorporated in 1888.

The British South Africa Company, incorporated in 1889.

Besides these Chartered Companies and the Colonies proper of Africa, the British Government has assumed the following Protectorates, viz. :—

The Oils River Protectorate, over the basin of the lower and middle Niger.

The Zanzibar Protectorate.

The Somali Coast Protectorate, including the island of Socotra and other dependencies under the Aden residency.

AFRICA—*continued*.

The charters appear to have been framed to a great extent on the precedent of the charter granted to the British North Borneo Company. The following short summary of the charter granted to the British South Africa Company¹ by H.M.'s Letters Patent dated October 29, 1889, will serve to give some idea of the legal status of these Chartered Companies.

By this charter, the Company is incorporated for the purpose of carrying into effect certain concessions or agreements made by some of the chiefs and tribes inhabiting the region of South Africa lying to the north of British Bechuanaland and to the north and west of the South African Republic, and to the west of the Portuguese dominions.

The Company is authorised (subject to the approval of a Secretary of State) to acquire by any concession, agreement, grant or treaty, any rights, interests, and powers for the purpose of government and preservation of public order in the lands or property comprised in the concessions and agreements aforesaid, or other lands or property in South Africa.

The Company is to remain British in character and domicile, and provisions are made saving certain interests previously acquired, and giving the Secretary of State power to restrain the acts of the Company if they appear to him to be contrary to public interests.

Power is given to the Company to enact ordinances (to be approved by the Secretary of State) and to establish and maintain a police force. Provisions are also made for the protection of the natives and for the regulation of the Company, and amongst other powers given to the Company is a power to carry on mining and other industries, and to make concessions of mining, forestal, or other rights.

Provision is also made for the execution of a deed of settlement (subject to the approval of H.M.'s Council) defining the constitution of the Company.

Power is reserved to Her Majesty at the end of 25 years, and at the end of every subsequent ten years, to repeal or vary any of the provisions of the charter relating to administrative and public matters. Power is also reserved to declare protectorates over or to annex any territory, and even to revoke the charter, if at any time it shall appear to the Crown that the Company is not acting

¹ The magnitude of these Companies' undertakings is illustrated by the British South Africa Company's Report for 1892, according to which "the Company's field of operations under the British flag covers about 750,000 square miles, an area exceeding that of France, Germany, Austria, and Italy combined."

AFRICA—*continued.*

in conformity with the charter, or is not promoting the objects which its promoters professed to have in view.

It will thus be seen that the Crown has in effect transferred its sovereign rights for the time being to the Company, which, when it has acquired, by treaty or otherwise, the rights of native chiefs or tribes to any land or property, can deal with such land or property, and the mineral rights in such land, by concession or otherwise, as it thinks proper.

In accordance with the provisions of a Proclamation by H.M.'s High Commissioner for South Africa, dated June 10, 1891, the law to be administered shall, as nearly as the circumstances of the country will permit, be the same as the law for the time being in force in the Colony of the Cape of Good Hope. No Act, however, passed by the Parliament of the Colony of the Cape of Good Hope after the date of the said Proclamation will apply to the Company's sphere of operations unless extended to the territory by express legislation.

Amongst other conditions on which the Company at present grants land to settlers are conditions reserving all precious stones, minerals, and mineral oils, with the right of ingress and egress, and the right to resume any land required for mining on payment for the same at the rate of £3 per morgen (= 2 acres), and compensation for wood, water, and improvements, to be determined, if necessary, by arbitration.

The following is a brief summary of the conditions on which persons are at present allowed to dig for precious metals within the sphere of the Company's operations:—

Prospectors' licenses (costing 1s.) must be taken out by anyone wishing to search for precious metals.

Every holder of such a license may peg off one alluvial claim of 150 feet square, and ten reef claims (in one block), each reef claim being 150 feet by 400 feet.

A license of £1 per month per claim is to be paid in respect of all alluvial claims worked.

Any claim-holder, after pegging off his block of reef claims, must develop them to the extent required by the Mining Commissioners, who will then issue an inspection certificate, after which arrangements can be made for the flotation of the block into a joint stock company on the terms that the Company and the claim-holder divide equally the purchase price paid for the property.

In reef claims no license beyond the prospecting license is necessary until the block of claims is floated into a company, when a license of 10s. per claim per month becomes payable.

AFRICA—*continued.*

Any discoverer of a *payable* alluvial goldfield has the right to peg off two alluvial claims in addition to his other rights.

It may also be observed that land grants made by the Company are to be subject, amongst other things, to the reservation of all precious stones, minerals, and mineral oils, with the right of ingress and egress.

THE TRANSVAAL OR SOUTH AFRICAN REPUBLIC.

Although the Transvaal or South African Republic cannot now be properly described as an English Colony or possession, it is so intimately connected with the English South African Colonies, and contains so large an English population, that it seems convenient to deal with it here in close proximity with the English South African Colonies.

The chief mineral production of the country is gold, but diamonds, copper, lead, cobalt, iron, and coal are also found. The output of gold in the Witwatersrand district alone now exceeds 100,000 ounces per month.

The principal law relative to mining in the South African Republic is the Law No. 10 of 1891, which relates to the digging for and dealing in precious metals and precious stones, whilst there are separate regulations with respect to the mining for base metals on proclaimed grounds.

As to pre-
cious
metals and
precious
stones.

By the law (No. 10 of 1891)—

The right of mining for and disposing of pre-
cious metals and precious stones belongs to the
State.

The Government may proclaim and throw open as public diggings State lands and also private lands, if possible, after conferring with the owner, such lands having previously been surveyed and represented on a diagram. Provision is also made for surveys and diagrams of all worked or developed diggings to be registered with certificates of title.

Every landed proprietor is at liberty, after giving notice of his intention to the nearest Mining Commissioner or certain other officials, to prospect for precious metals or stones without a license on his own land, and to work or cause to be worked mines on his property subject to the Government right of investigation, but on discovery of payable precious metals he must report the same to an official.

Any white man who has paid his personal taxes for the year, and who obtains the written permission of the owner of the land

AFRICA—*continued.*

THE TRANSVAAL OR SOUTH AFRICAN REPUBLIC.

to prospect on his property, can obtain a prospector's license (costing 5s. per month) for a period not exceeding six months, which may, however, be extended by the Mining Commissioner for a further term of six months.

Finders of payable precious metals or stones at least twelve miles away from an already worked locality may peg off one claim, whether reef or alluvial, and may work such claim without license, and have other privileges.

Private lands can be proclaimed as public fields with the consent of the owner. In such case the owner or owners are entitled to peg off for themselves a number of claims whether reef or alluvial (varying from one to ten according to the size of the farms) after the prospector has pegged off his claim. The owner of private grounds on which diggers' and prospectors' licenses are issued are entitled to receive monthly one-half of the receipts from such licenses. The owner is entitled to three-fourths of the receipts from stand licenses.

The owner of land on which precious metals or stones are discovered, who wishes to have the right to open and work mines on the land, must have a mining lease from the Government, to be issued for a period of not less than five nor more than twenty years, renewable for another period of twenty years or less, for which a rent of 10s. per morgen (=two acres) per annum, or at the option of the Government $2\frac{1}{2}\%$ on the value of the finds during the previous year, must be paid, which cannot be refused unless the Government wishes to proclaim or throw open the ground, and even then a mining lease may be granted up to $\frac{1}{10}$ th of the extent of the land, and the rights of the owners of private lands as to land for occupation water are protected. Prospecting is prohibited in public squares, streets, &c. Lands may be proclaimed within native locations, subject to certain provisions for compensation to the native chiefs or tribes.

Provision is made for the appointment of Mining Commissioners and other officials, in all proclaimed fields, who can give permission for the construction of all necessary roadways and water-ways over property belonging to third parties, subject to compensation for damage to be fixed by arbitrators or the Mining Commissioners as their umpire, but objectors can appeal to the Minister of Mines, whose decision is to be final. Mining officials are prohibited from holding claims, from carrying on any trade, or undertaking any agency, or having any share in a mining company or syndicate or partnership in a mining interest.

Individuals or companies, being the holders of concessions or

AFRICA—*continued.*

THE TRANSVAAL OR SOUTH AFRICAN REPUBLIC.

leases on private or Government lands, may grant permission to persons to dig on their behalf, who must take out licenses, in which case the concessionnaire or lessee shall be entitled to receive from the Government monthly three-fourths of the money paid for licenses.

Special provisions are made for the granting and holding of water-rights on Government and proclaimed lands.

No concessions are to be granted on Government ground, but leases may be granted to one or more diggers of tracts to the extent of not less than 150 square yards, or more than 1,000 square yards, at rentals of 10s. per morgen per annum, the leases to be stamped with £5, subject to such conditions as the Government shall deem desirable. The law provides in detail for the mode and form of application for leases. Diggers or prospectors being holders of claims adjoining one another, not more than twelve in number, may amalgamate and have such claims registered with all the water-rights attached to them as amalgamated.

Every white man who conforms to the laws of the country, and proves that he has paid his personal taxes for the current year, has the right to obtain a digger's license for 20s. a month to dig or mine for precious stones and metals on a public field.

Any person residing in the Republic, and any male person of legal age residing abroad, may hold diggers' or prospectors' licenses through the holders of a power of attorney, and subject to certain conditions laid down in the law; and where a license expires without being renewed the claim cannot be pegged off by another person but reverts to Government, and the former holder of the claim may recover his former rights by taking up a new license within 30 days on payment of a fine, otherwise the claim becomes saleable by public auction.

Every licensed digger may hold on every licensed digging one alluvial and one reef claim, and may purchase any number of claims from other licensed claim-holders, in which latter case he must hold a licence for every claim. Pegging off claims between sunset and sunrise is prohibited, as also on Sundays and on Christian holidays recognised by the law.

An alluvial claim for digging for precious metals is to be 150 feet square, a claim to dig for precious stones 30 feet square, and a quartz-reef claim 150 feet long (in the direction of the reef) and 400 feet broad.

Every licensed digger or prospector is entitled to have a stand for his residence in the immediate vicinity of his claim or claims,

AFRICA—*continued.*

THE TRANSVAAL OR SOUTH AFRICAN REPUBLIC.

not, however, in a locality known to contain precious metals or stones, without any payment for stand license, but the holding must be relinquished on demand of the Mining Commissioner. Every white person may obtain stand licenses for the erection of stores, dwelling-houses, or other buildings (entitling him to hold a piece of ground of 50 feet square, or even larger areas by the permission of the Government, so long as the same is not an obstruction to digging on ground known to hold precious metals or stones) on payment of 7s. 6d. a month, or higher sums where stands are of larger than the usual area.

Every digger or license-holder must assist to preserve public order on pain of loss of license and fine; and rebellion or resistance to the Government or the lawful authority on the fields is, beyond the ordinary legal punishments, punishable by confiscation of all goods.

Heavy penalties are provided in case of digging, prospecting, or trading without a license. Licenses to trade in rough precious metals or stones cost £10 per annum.

Anyone found in possession of amalgam or rough gold, who can give no proof of his having come into possession of it in a lawful manner, may be fined £100 or less, or imprisoned with or without hard labour for two years or less.

No coloured person can become a license-holder, or be in any manner connected with the working of diggings, except as a working man in the service of the whites; and payment of coloured servants in rough metal or stones, or trading with coloured persons in rough metal or stones, is prohibited under very heavy penalties.

Permits for the employment of coloured labourers have to be paid for at 1s. per month for each labourer.

Notice must be given to the mining authority before claims are abandoned.

Special provisions and regulations may be made for every proclaimed field.

AMERICA.

(North.)

DOMINION OF CANADA.

The land of Canada consists of granted and ungranted land. The ungranted land in the older provinces is the property of the provinces, and is disposed of by officials appointed for the purpose in accordance with the provisions of statutes passed by the several provincial legisla-

AMERICA (NORTH)—*continued*.

DOMINION OF CANADA.

tures. The ungranted land in Manitoba and the North-West Territories¹ belongs to the whole people of Canada, and is administered by the Federal Government ("Canada," 1889).

The law as to dealings with unappropriated Crown lands is regulated by "The Dominion Lands Act" (Revised Statutes of Canada 1886, c. 54). Under this Act, agricultural lands are open to homestead entry and pre-emption in accordance with the regulations of the Act; but by—

Section 47. Lands containing coal and other minerals are not to be subject to the provisions of the Act respecting sale or homestead entry; but are to be disposed of in the manner and upon terms and conditions to be fixed by the Governor in Council.

Section 48. No grant from the Crown of land in freehold or for any less estate, shall be deemed to have conveyed, or to convey, the gold or silver mines therein, unless the same are expressly conveyed in such grant.

Section 49. Discoverers of minerals who had applied for grants of the land containing such minerals before the date of an Act passed in the year 1880 to have certain rights.

Under the Dominion Land Regulations made by order of the Governor-General in Council on September 17, 1889 (sec. 8), all patents from the Crown for lands in Manitoba or the N.W. Territories are to reserve to H.M. all mines and minerals to be found on such lands, with full power to work the same, and for that purpose to use and occupy such lands, or so much thereof and to such an extent as may be necessary for the effectual working of the said minerals, or the mines, pits, seams, and veins containing the same, except in the case of patents for lands previously sold or disposed of for valuable considerations, or for lands which have been entered as homesteads before the date upon which the now reciting Regulations came into force.

Under the same Regulations, ss. 44 to 51, provisions are made enabling persons to prospect for minerals on lands which have been patented and entered, and on which the mining rights have been reserved (but not on the sites of buildings and enclosed lands), on making compensation to the owner for damage done to his land, the amount in case of dispute to be determined by arbitration; the mining right can afterwards be acquired by the person prospecting at the rate and on the terms prescribed by the Mining Regulations less the value of the surface rights, but before a patent of the mining rights can be issued, the party desirous of obtaining the same must acquire the surface rights either by arrangement with the owner or by arbitration.

Somewhat similar Regulations were made by an order of the same date as to lands of the Dominion within the Railway Belt in British Columbia.

The disposal of Dominion lands containing minerals other than coal appears to be governed by Regulations established by an Order in Council of November 9, 1889 (ch. 99 of the Consolidated Orders in Council of Canada),

¹ A portion of British Columbia, which is known as the Railway Belt, is also in the disposition of the Federal Government, but it has been decided that the right to administer minerals within that belt belongs to the Provincial Government, hence the arrangement under the Dominion Land Regulations, No. 11, hereinafter referred to.

AMERICA (NORTH)—*continued*.

DOMINION OF CANADA.

which provide (cl. 2) that no mining location or mining claim shall be granted until actual discovery has been made of the vein lode or deposit of mineral or metal within the limits of the location or claim. As regards *petroleum*, however, the Regulations last referred to have been amended (by Order in Council of December 18, 1890) so that an applicant who has otherwise complied with the requirements of the Regulations may obtain an entry for a location upon making an affidavit that he believes that petroleum exists on the location applied for, but the sale of the location is not to be completed unless within five years from the date of the location the applicant can prove that he has at least one oil-well in operation thereon producing oil in paying quantities.

By a still later order (made August 25, 1891) the provisions of the orders of 1889 and 1890 last referred to, which apply to petroleum lands, are cancelled except as to locations for which entries had been theretofore made.

Under the Dominion Land Regulations the price per acre of coal lands is: for land containing lignite or bituminous coal, \$10, and for anthracite coal, \$20; and any person may explore vacant Dominion lands for mineral deposits, and on discovering such may obtain a mining location, on certain specified terms, entitling him to enter on the land and work it for one year, and at any time within five years from the date of recording his claim, and on proof of expenditure of \$500 and payment of \$5 per acre and \$50 survey fee may obtain a patent for the claim. Under an order of the Governor in Council, dated February 11, 1890, it is declared (with respect to the lands within the railway belt in British Columbia) that an arrangement has been come to between the Dominion Government and the Government of the Province of British Columbia, that no disposition of lands containing minerals (except coal lands) shall be made by the Dominion Government other than by patent in fee simple, to the intent that the minerals in the said belt, other than coal, may be administered under the mining laws of the Province; that all lands containing minerals (except coal lands and Indian reserves) offered for sale by the Dominion Government shall be open for purchase by the Provincial Government at the price of \$5 per acre, and in such case shall be set apart from alienation by the Dominion Government, and that all minerals, including gold and silver, within Indian reserves are to be administered by the Department of Indian Affairs, the agreement being terminable at any time by either Government.

Further special Regulations as to the disposal of *coal lands* belonging to the Dominion Government, and of *mineral lands* belonging to the same Government other than those situated in British Columbia, may be found in the Canadian Mining Manual, 1893, published at Ottawa. Special Regulations which were made by Order in Council of October 12, 1892, as to licenses for working mines and minerals in the Rocky Mountains Park of Canada, may be found in the Dominion Statutes for 1893.

The import duties charged in Canada (as regulated by the Customs Tariff, 1889), are considerable, *e.g.*:—

Iron, in pigs per ton, \$4=16s. 5d.

„ bars, &c., \$13=£2. 13s. 3d.

AMERICA (NORTH)—*continued.*

DOMINION OF CANADA.

Copper, in pig bars, &c. 10 per cent. ad val.

,, sheets, 15 per cent. ad val.

,, manufactures of, 30 per cent. ad val.

Lead, in bars, &c., per 100 lbs., 60 cents = 2s. 6d.

,, manufactures of, 30 per cent. ad val.

Coal, anthracite free; bituminous, per ton of 2,000 lbs., 60 cents = 2s. 6d.

From Return of Colonial Tariffs, presented to the English Parliament, June 1891,¹ and Statistical Year-Book for Canada of 1892 (published in 1893).

ONTARIO.

Name	Minerals	Ownership	Remarks
ONTARIO . .	Gold Silver Lead Copper Iron &c., &c.	<i>In surface-owner</i> , and as to lands granted before 1891 free from any royalty or tax, but as to land granted since 1891 subject to royalties to Crown as shown below (<i>see</i> "The Mines Act, 1892," Stat. of Ont. c. 9, ss. 3 and 4).	Previously to 1891 all Crown royalties and reservations had been abolished, and it had been declared that no future reservations of gold, silver, iron, copper, or other minerals were to be made out of Crown lands granted as "Mining lands." Mining <i>claims</i> might be granted by Crown (out of Crown lands) at \$2 per acre.—The General Mining Act (Revised Statutes of Ontario, 1887, c. 31, being the repetition of provisions enacted in the Mining Act of 1869; but see note on next page).

¹ It is understood that the Dominion Government has enacted that until May, 1896, all mining machinery of a kind not manufactured in Canada may be imported into that country free. The home manufacture of mining plant is said to be very limited.—(The "Iron and Coal Trades Review," November 3, 1893.)

AMERICA (NORTH)—*continued.*

ONTARIO, &c.

In the year 1888 the Lieutenant-Governor in Council of Ontario appointed a Commission to inquire into and report upon the mineral resources of the Province, and the measures for their development. The Commissioners in 1890 issued a very elaborate report upon the subject of their inquiry.

The result of their report seems to have been the immediate passage (in 1890) of an Act for the regulation of mines (53 Vict. c. 10), and the passage, in the following year, of an Act to amend the Public Lands Act (54 Vict. c. 7), whereby it was enacted that in all future grants of agricultural land all mines, minerals, and mining rights should be taken to be reserved unless otherwise provided in the grant or patent from the Crown, and that the same should be property separate from the surface of the soil unless the proprietor should acquire it as a mining location or otherwise; these provisions not to apply to land sold under the General Mining Act for mining purposes, or sold under the now reciting Act without reserve of minerals under the provisions therein contained. An Act to amend the General Mining Act (54 Vict. c. 8) was also passed in 1891, whereby prices were fixed for lands to be sold as mining locations in certain specified districts, and certain labour conditions were provided for in respect of lands so sold, on failure of which the lands were to revert to the Crown. It was also enacted that all ores and minerals produced from lands thereafter to be sold or leased by the Crown should be subject to royalties to the Crown for the use of the Province as follows, viz.: Silver, nickel or nickel and copper, to 3 per cent., and all other ores except iron to such royalty as should be from time to time imposed by Order in Council, not exceeding 3 per cent., and iron ore not exceeding 2 per cent., such royalties not to be taken until after seven years from the date of the patent or lease (but the grantee or owner of any mining location was required during the first seven years to expend in mining operations where the area exceeded 160 acres \$4 per acre, and for a less area \$5 per acre), the royalties to be calculated on the value of the ores at the pit mouth. Provision was also made for the granting of leases of mining lands for ten years, with the right of renewal for a further ten years, and afterwards for a further ten years if conditions performed, instead of grants in fee simple of mining lands. The rents and conditions (including labour conditions) were to be subject to regulations, and the lessee to have a right of pre-emption on certain terms; and provision was made for forfeiture of leases in case of non-payment of the rent. The Act also provided for the establishment of a Bureau of Mines to aid in promoting the mining interests of the province. Another Act of the same Session (54 Vict. c. 60) provided for the establishment and maintenance of mining schools in various districts of the colony. The whole law as to mining in Ontario has now been consolidated by the Mines Act, 1892, Stat. of Ontario, 55 Vict. (1892) c. 9, under which all royalties, taxes, or duties imposed in respect of minerals in land granted before 1891 are abandoned, and such minerals are to be always free from such royalties, &c., but minerals in lands granted after 1891 are to be subject to the small royalties mentioned above, but not during the first seven years of the patent or lease. The provisions of this Act appear to be similar to those of the

AMERICA (NORTH)—*continued.*

ONTARIO, &c.

Act of 1891 referred to above; but it also provides for the issue of miners' licenses and grants of mining claims.

By an Act of 1893 (Stat. of Ont. 56 Vict. c. 115) a school of mining and agriculture, established at Kingston, has been incorporated.

QUEBEC.

Name	Minerals	Ownership	Remarks
QUEBEC . .	Gold ¹ Copper Iron Plumbago Traces of lead Asbestos, &c.	As to grants made up to 1880, <i>in the owner of surface</i> (unless purchased with reservation of mines, in which case owner may purchase mines at a price, including the original purchase-money of the land, of \$5 per acre if for <i>superior</i> ² metals, and \$2 per acre if for <i>inferior</i> metals, these prices to be increased to \$10 and \$4 per acre respectively if the land situated within twelve miles from a railway in operation). As to	The Quebec General Mining Act of 1880 (Statutes of Quebec), 43 and 44 Vict., c. 12, and Revised Statutes of 1888 (1411-1582), replaced by an Act of 1892 (Stat. of Quebec, 55 and 56 Vict. c. 20).

¹ Recently Mr. Lockwood, who owned 80,000 acres of auriferous lands in the Province of Quebec, sold 8,000 acres of them to Messrs. McArthur Bros. & Co. for \$8,000. Shortly afterwards Messrs. McArthur Bros. & Co. sold a portion only of these 8,000 acres for \$50,000.—("Canada," 1889.)

² "Superior metals" are defined to include the ores of gold, silver, lead, copper, nickel, graphite, asbestos, mica, and phosphate of lime; "inferior metals" all other minerals and ores.

AMERICA (NORTH)—*continued.*

QUEBEC.

Name	Minerals	Ownership	Remarks
QUEBEC (<i>cont.</i>)		<p>grants made since 1880 for agricultural purposes, <i>in the Crown</i> (but owners have preferential rights to work mines on payment of additional sums as before mentioned), and in case of any grant made as a mining location, <i>in the owner of surface.</i> The Lieutenant-Governor in Council has power to claim royalty due to the Crown on any land, but only within five years from the date of alienation, such royalty not to exceed 3 per cent. of the value of the mineral extracted after deducting the cost of the extraction.</p>	

Under the Mining Act of 1880 (as amended in 1892) searches may be made for mines upon unoccupied public lands without license, or prospecting licenses may be obtained, and all lands supposed to contain mines or ores belonging to the Crown may be acquired from the Commissioners of Crown lands by purchase, or be occupied and worked under a mining

AMERICA (NORTH)—*continued.*

QUEBEC.

license. Mining concessions are not, as a rule, to exceed 400 acres in extent, and are obtained on payment of such sums as are mentioned in the table above, or at higher prices if sold by public auction, and mining lands are only to be sold on the express condition that the purchaser shall commence *bonâ fide* the mining of the minerals within two years, and shall, during such period, spend a sum of not less than \$500 if for superior metals, and of not less than \$200 if for inferior metals, and the patents are only to be issued on proof that such conditions have been fulfilled. Licenses may be obtained to explore for mines (with power afterwards, subject to the preferential rights of the owner of the surface, to purchase) either on public or on private lands where the mining rights belong to the Crown, and every person is prohibited from mining either upon public or private lands where the mining rights belong to the Crown, without having purchased the same, or obtained a mining license costing \$5, and an annual rental of \$1 per acre renewable on the same terms. In the case of private lands, the owner is entitled to the preference to work, or to compensation for the land required and damages, and no buildings or inclosures must be entered upon without the consent of the owner. Mining licenses cannot, as a rule, be issued for an extent of over 200 acres. Each applicant for a license to mine on public lands may stake out a claim, and must register his claim. Discoverers of new mines on public lands may obtain licenses free for a year. Licenses costing \$5 must be taken out for the erection of crushing machinery or mills. The Act of 1892, divided into 165 sections, contains many minute provisions as to mining which cannot be set out in detail here.

AMERICA (NORTH)—*continued*.

MANITOBA.

Name	Minerals	Ownership	Remarks
MANITOBA .	Coal Iron-ore and traces of gold, silver, and copper	<i>In surface-owner</i> where grants have been made in fee simple without reserva- tion, as was the case before the year 1880.	The early Dominion Land Acts provided that no reservation of gold, silver, iron, cop- per, or other mines or minerals should be in- serted in any patent from the Crown grant- ing any portion of the Dominion lands (Sta- tutes of Canada, 35th Vict. 1872, c. 23). ¹ The public lands in this Province are, as a rule, administered by the Federal Govern- ment, but some lands have been granted to the Province which are administered under the provisions of "The Provincial Lands Act" (Revised Stat. of Man. 1891, c. 120).

¹ This Act applied exclusively to the lands included in Manitoba and the North-West Territories. The same provision was repeated in the Dominion Lands Act of 1879, but has disappeared from the later Dominion Land Acts; and dealings with lands containing minerals are now regulated by the subsisting Dominion Lands Act (Revised Stat. of Can. 1886, c. 54), and the Regulations thereunder (*see* pages 251 and 252 *ante*).

AMERICA (NORTH)—*continued*.

NEW BRUNSWICK.

Name	Minerals	Ownership	Remarks
NEW BRUNSWICK	Coal Iron Plumbago Some gold Copper Lead Albertite Antimony &c.	<i>In owner of surface</i> (but subject to payment of royalties to Crown except in respect of <i>surface veins</i>)	Apparently before 1891 the exclusive right of digging for and raising coal and other minerals was considered to be vested in the owner of the surface, but (except in cases where the owner had a right to mine without payment of royalty) he had to obtain a license from the Crown before digging, to be granted subject to the payment of such royalties as the Governor in Council might think fit (<i>surface mines</i> not exceeding 2 ft. thick not being subject to royalties ¹) (Consolidated Statutes of New Brunswick, 1877, ch. 18, ss. 4 to 7); but by the "General Mining Act" Statutes of New Brunswick (1891) c. 16, as amended in 1892 and 1893, it is declared that in all cases in which mines and minerals have been excepted and reserved to the Crown, such

¹ The only productive seam of coal worked at present is a *surface* one, 22 inches thick, said to produce an excellent steam coal, and is believed to extend over an area of at least 600 square miles.—("Canada," 1889.)

AMERICA (NORTH)—*continued.*

NEW BRUNSWICK.

Name	Minerals	Ownership	Remarks
NEW BRUNSWICK (<i>cont.</i>)			mining rights are property separate from the soil covering such mines and minerals (but all veins or deposits of coal on granted lands known as surface veins, and not exceeding 2 ft. in depth, are excepted from the operation of the Act), and provision is made for the reservation of royalties to the Crown similar in amount to those fixed by Stat. for Nova Scotia (<i>see</i> next page).

The Act of 1891 amended as above contains powers of dealing with gold and silver mines and other mines held by the Government for the benefit of the Province by lease or license similar to those enacted by the Legislature of Nova Scotia (*see* next page). The Governor in Council has power to defer the payment of royalty for ten years from the date of the lease; and the Municipal Council of any county in the Province may exempt from taxation all plant, machinery, works, buildings, or improvements used or erected for mining purposes for a period not exceeding 20 years (Stat. of N. S. 1893, 56 Vict. Nos. 10 and 11).

NORTH-WEST TERRITORIES.

Name	Minerals	Ownership	Remarks
NORTH-WEST TERRITORIES	Coal Petroleum Gold, &c.	<i>In surface-owner</i> where grants made before 1880.	The same remarks apply as in the case of Manitoba (<i>see</i> p. 258 ante).

AMERICA (NORTH)—*continued.*

NORTH-WEST TERRITORIES.

It is believed that there exists in the Athabasca and Mackenzie valleys the most extensive petroleum field in America, if not in the world, and which is believed to be of enormous value. A Select Committee of the Dominion Senate, appointed to inquire into the resources of the Great Mackenzie basin, reported in 1888 their opinion that a tract of about 40,000 square miles embracing the petroleum field should for the present be reserved from sale, and it is understood that the recommendation has since been carried into effect.

NOVA SCOTIA.

Name	Minerals	Ownership	Remarks
NOVA SCOTIA	Coal ¹ Gold Iron, &c.	With certain exceptions, referred to below, the mines are vested <i>in the Crown</i> , and as to mines other than gold and silver, for the <i>benefit of the Province</i> .	Surface-owner or tenant entitled to compensation for land and easements.

The royalties are fixed by statute as follows :—

On *gold and silver* 2 per cent. on gross output (and an annual charge of \$2 per area—100 ft. by 150 ft.—if mines not worked).

On *coal* 10 cents per ton of 2,240 lbs. of coal sold or removed from the mine, or used in the manufacture of coke, or other form of manufactured fuel.

On *copper* 4 cents upon every unit, that is, upon every 1 per cent. of copper contained in each and every ton of 2,852 lbs. of copper ore sold or smelted.

On *lead* 2 cents on ditto (the ton being of 2,240 lbs.).

On *iron* 5 cents on ditto (the ton being of 2,240 lbs.).

On *tin and precious stones* 5 per cent. of their value.

The history of Nova Scotia coal-mining is stated to be as follows—viz., in the early part of the present century all the

¹ In 1891 the output of Nova Scotia coal amounted to 1,849,945 tons.

AMERICA (NORTH)—*continued*.

NOVA SCOTIA, &c.

minerals of the Province were granted¹ to the Duke of York, who transferred them to the London jewellers, Messrs. Rundle & Bridge, who sold them to the General Mining Association of London in 1827. The Company worked the mines extensively until 1857, when arrangements were made with the Government whereby the General Mining Association surrendered their claims except to certain large tracts in the various coal districts, and the public were allowed to open mines under leases from the Government.

The grants of land to the early settlers in the Province of Nova Scotia contained no regular reservation of minerals. In some instances gold, silver, and precious stones only were reserved; in other cases gold, silver, iron, copper, lead, &c., were retained for a source of revenue to the Crown. After the agreement with the General Mining Association the Government passed an Act by which they retained² in previous grants the gold, silver, coal, iron, copper, lead, tin, and precious stones, whenever reserved, and for the purpose of revenue made the above reservations in all future grants. This Act releases to the surface-owner all gypsum, limestone, fireclay, barytes, manganese, antimony, &c., and any of the above reservations whenever they are not specified (as reserved) in the grant. A complete list is published of all the grants, and information as to every grant can be obtained at the Crown Lands Office.—("Canada," 1889.)

The whole law as to mines in Nova Scotia has been amended and consolidated by the "Mines and Minerals Act 1892" (N. S. Stat. 1892, c. 1), since amended by two Acts passed in 1893 (N. S. Stat. 56 Vict. cc. 2 and 3).

By the Act of 1892 the Governor in Council is authorised to appoint a Commissioner and Deputy-Commissioners, and an Inspector and Deputy-Inspectors of Mines, who are not to be themselves interested in mines or mining operations, and a Board of Examiners whose duty is to examine colliery officials (ss. 3-8).

The Governor in Council may also proclaim gold districts,

¹ The grant (or rather demise) was, in fact, dated August 25, 1826, and was a lease for 60 years from that date at the rents and royalties therein mentioned.

² The description given in the above extract of the action of the N.S. Legislature is not quite accurate, as appears from the Rev. Stat. of N.S., published in 1857 (2nd Ser. Tit. vi. c. 27). The actual effect of the enactment referred to was to extend to certain owners of land comprised in grants made after the date of the lease to the Duke of York, which had contained wider reservations of minerals than were inserted in previous grants, the benefit of the less extensive reservations above referred to.

AMERICA (NORTH)—*continued*.

NOVA SCOTIA, &c.

the mines of gold, or gold and silver, in which are to be laid out in areas of 250 ft. by 150 ft. (ss. 9 and 10). Applications in writing may be made for leases of such areas (if not already under license or lease) accompanied by payment of \$2 for every area, and a subsequent payment in advance of 50 cents per annum for each area under risk of forfeiture (ss. 17 and 18). Leases may be granted by the Commissioner of Public Works and Mines on behalf of the Crown in a form prescribed by the Act, reserving the rights of the owners of the soil; and, if a lease is granted on private lands, the lessee must before making entry obtain from the owners permission to enter, and for easements, the amount of compensation payable to such owner being determined by agreement or arbitration as provided by the Act (ss. 19–27), and the lessee remains liable for subsequent damages. The leases are for 40 years, but may be surrendered. There is to be employed in each year on the demised premises 40 days' labour for every area comprised in the lease, and on performance of the labour condition the lessee is entitled to be refunded his payment in advance for the year (ss. 29–33 and 18^b). Leases or licenses to search may be granted over not exceeding 100 areas, the licenses being for a period of twelve months, on payment of 50 cents per area, and subject to making compensation for damage to owners of private lands, and without power to enter on buildings or inclosed lands without the consent of the owner or special license of the Governor-General (ss. 36–44).

In respect of all gold and silver mined either under lease or license, a royalty of 2 per cent. on the gross amount is to be paid (s. 45).

Licenses must also be obtained to run or use any mill or machinery for the treatment of gold or silver, subject to special conditions (ss. 46–60).

Lessees must make special returns, and leases may become forfeited for neglect to work *bonâ-fide* for five years. If the Commissioner is unable to decide who is the first applicant for a prospecting license or lease of a gold or gold and silver area, he may grant the same to the applicant who offers and pays the highest premium above the price fixed by law or may sell the same by public auction (ss. 61–77). Penalties are imposed for unauthorised mining (ss. 79–90).

The Commissioner may grant licenses to search on land not already under license or lease, to be in force for 18 months from

AMERICA (NORTH)—*continued.*

NOVA SCOTIA, &c.

date of application, entitling the holder to enter on any land covered thereby, and to dig and explore for such minerals thereon, other than gold or silver, as the Crown holds for the benefit of the Province of Nova Scotia. **As to mines other than gold or silver.** The application for the license must be in writing, accompanied by a payment of \$30, and the applicant must give a bond in the penal sum of \$800, with sufficient sureties conditioned to make good damages in case of entry on private land. The area comprised in the license must not exceed 5 square miles. Under certain circumstances second rights of search may be granted. Questions as to damage to private lands are to be determined as in the case of prospecting licenses for gold. The holder of a license may at any time apply for a lease of a portion of the area, but it is not necessary to have a license in order to obtain a lease. Applications for leases must state the mineral for the purpose of mining which a lease is sought, and be accompanied by a payment of \$50. Areas of leases for coal or iron are not to exceed 1 square mile, for copper or lead $\frac{1}{2}$ of a square mile, and for copper or tin $\frac{1}{4}$ of a square mile. The terms of leases are 20 years, renewable for periods not exceeding 80 years altogether. Barriers must be left; the leases must not be assigned, transferred, or mortgaged, without the consent of the Governor-General in Council, but they may be surrendered; certain rents of \$30 for each square mile or part of a square mile (merging in royalty) must be paid in advance, under risk of forfeiture (registered mortgagees being entitled to notice, and having power to avoid the forfeiture by payment before it takes place, under the 1st Act of 1893), and the leases are to contain all the conditions, provisions, and reservations generally contained in such leases, or that may be required for the safe and proper working of the mines, or by any order of the Governor in Council, or any Act passed by the Legislature of the Province, and are also to contain a provision that the royalties may be increased, diminished, or otherwise changed by the Legislature. Leases become liable to forfeiture if not *bonâ-fide* worked for a year, but not without notice (ss. 91–129).

Section 132 of "The Mines and Minerals Act, 1892," empowered the Governor in Council to make rules and regulations as to the working of mines; but this section was wholly repealed by the very next Act of the same session.

Section 156 of "The Mines and Minerals Act, 1892," authorised the Governor in Council, whenever it appears that any person

AMERICA (NORTH)—*continued.*

NOVA SCOTIA, &c.

working or proposing to work any coal mine or mines is willing to pay to the Province a greater royalty per ton than that mentioned in the Act, or to prosecute coal-mining on a very extensive scale, so as to largely increase the Provincial revenue derivable from royalties, to accept the surrender of any coal lease or leases held by such company or person, and to issue in lieu thereof a new lease or leases containing such terms and conditions as might be deemed expedient as respects area, term, royalty, or taxation, provided that the royalty should not be less than that before referred to. This section was admittedly introduced into the Mining Act in anticipation of an arrangement, which has since been carried out and confirmed by the Provincial Legislature, for a lease of coal mines in Cape Breton County to certain American capitalists, who had agreed to buy up certain subsisting leases and surrender them to the Government, with a view to the new lease being granted to them. The special terms of this new lease appear to be as follows, viz. :—

That the period of the lease is to be for 99 years, and for a further period of 20 years, unless either of the parties give notice to determine it before the end of the 99 years.

That the lessees are not to be taxed for Provincial purposes, though liable to local or municipal taxation.

That the Government undertakes not to refuse the right of transfer of any leases which the lessees may buy up in the Cape Breton district, or of any lease vested in the lessees, to any other person, firm, or corporation.

That the lessees pay a royalty of $12\frac{1}{2}$ cents per ton on all coal sold or removed from the mine, and that such royalty be paid on an output of not less than 250,000 tons, after the lessees have acquired mines which in 1891 produced that amount, unless any deficiency should be caused by circumstances beyond the reasonable control of the lessees.

The agreement was not ratified without much opposition on the ground that it amounted to the conferring of a monopoly, and lengthy debates in both Houses of the Provincial Parliament. The confirming Act was, however, finally passed and confirmed by the Government on the 1st February, 1893 (56 Vict. c. 1).

In the course of the debates which preceded the passage of the last-mentioned Act an interesting question was raised as to whether, seeing that by the Act No. 1 of 1849, by which the right and title to the minerals of Nova Scotia became vested in that Province, the period during which the same were so vested was limited to the

AMERICA (NORTH)—*continued.*

NOVA SCOTIA, &c.

reign of her present Majesty and 18 years afterwards, any leases of mines granted by the Province would remain valid beyond that period or not; and it was contended that the difficulty was not met by the provision of the British North America Act, 1867 (Imp. Stat. 30 and 31 Vict. c. 3), by virtue of which the Dominion of Canada was established, which, whilst declaring (s. 109) that all mines, minerals, and royalties belonging to the Province of Nova Scotia were to belong to that Province, was qualified by the addition of the words—"subject to any trusts existing in respect thereof, and to any interest other than that of the Province in the same." The opinion, however, prevailed that the Act of 1849, although limited as before mentioned, was equivalent to the Acts by which in England the hereditary revenues of the Crown are given up in return for the Civil List (*e.g.*, 1 and 2 Vict. c. 3), and which, though limited (s. 17) to continue in force for six months only after the death of the reigning Sovereign, are practically safe to be renewed at the commencement of any new reign; besides which it was pointed out that the Crown must be taken to be bound by leases granted under its authority, and indeed in its name.

It appears, therefore, that the Government of Nova Scotia has both the power and the will to offer encouragement to foreigners who may be prepared to assist in the development of the very extensive coal deposits of the country.

The regulation of mines in Nova Scotia is provided for by c. 8 of the revised Statutes of Nova Scotia, c. 9 of the Acts of 1891, c. 4 of the Acts of 1892, and c. 10 of the Acts of 1893.

PRINCE EDWARD ISLAND.

Name	Minerals	Ownership	Remarks
PRINCE EDWARD ISLAND	—	—	There is no mining in Prince Edward Island.—The Statistical Year-Book of Canada for 1892 (published 1893), p. 430.

BRITISH COLUMBIA.

Name	Minerals	Ownership	Remarks
BRITISH COLUMBIA, including Vancouver's Island, &c. ¹	Gold Silver Coal Iron Copper, &c.	As to gold and other precious metals in "Placer" lands, in <i>free miners</i> , under certificates granted by the Gold Commissioner or Mining Recorder.	<i>See "Placer" Mining Act, 1891 (Stat. of British Columbia, 91, c. 26), s. 10.</i>
		As to ditto, and all other minerals (except coal) on Crown lands, and where right has been reserved to Crown and its licensees, in <i>free miners</i> as aforesaid.	<i>See "The Mineral Act, 1891" (Stat. of British Columbia, 91, c. 25), s. 10, as amended by "The Mineral Act (1891) Amendment Act, 1892," and "The Mineral Act (1891) Amendment Act, 1893."</i>
		As to coal (and apparently as to all other minerals except gold and other precious metals where right to mine has not been reserved to the Crown and its licensees) in <i>surface owner</i> (subject, as to coal, to a reservation of 5 cents (=2½ <i>d.</i>) per ton of merchantable coal raised or gotten. No royalty on dross or fine slack).	<i>"The Land Act," 1884 (as amended in 1890 and 1891, Consol. Stat. of B.C., 1888, c. 66). Since 1891 all minerals, precious or base, other than coal, appear to have been reserved from Crown grants of pre-empted lands (The Land Act Amendment Act, 1891, s. 11).</i>

¹ As to land in British Columbia within the railway belt belonging to the Dominion Government *see* p. 252 *ante*.

AMERICA (NORTH)—*continued.*

BRITISH COLUMBIA.

Crown lands in this Colony, under the "Land Act, 1884" (as amended in 1890, 1891, 1892, and 1893), are classed as surveyed or unsurveyed lands, and may be acquired by "record" and pre-emption or by purchase.

The price of Crown lands pre-empted is \$1 per acre. The Crown grant reserves to the Crown the right for the Crown, and for any person or persons acting under the authority of the Crown, to enter on the land and get thereout any minerals, precious or base, other than coal, thereon or thereunder, and to use the said land and the easements and privileges thereto belonging for the purpose of such raising and getting and every purpose connected therewith, paying in respect of such raising, getting, and use, reasonable compensation.

The Land Act, 1884 (amended as above), reserves to the Crown a royalty of 5 cents ($=2\frac{1}{2}d.$ per ton) on every ton of merchantable coal raised or gotten from any land acquired under the provisions of that Act, not including dross or fine slack, and directs that in any Crown grant to be issued in pursuance of the Act there shall be contained a reservation of the said royalty.

The Land Act also provides that in all grants theretofore issued by which the coal is reserved to the Crown, the coal so reserved is to become the property of the grantees and their assigns, subject to the aforesaid royalty.

Under the "Mineral Act, 1891" (as amended in 1892 and 1893), a "free miner" must be over 18 years of age. His certificate must be for one or more years at the rate of \$5 a year, and is not transferable. He may enter, locate, prospect, and mine upon any waste lands of the Crown for all minerals other than coal, and, on making compensation, upon all lands the right whereon to so enter, prospect, and mine all minerals other than coal, shall have been or shall be reserved to the Crown and its licensees (except land occupied by any building or falling within the curtilage of any dwelling-house, and any orchard or any land actually under cultivation or lawfully occupied for mining purposes other than placer mining, and also Indian reservations). The amount of compensation in cases of dispute is to be determined by the Court having jurisdiction in mining disputes with or without a jury.

Free miners' claims must be recorded and re-recorded from year to year at a cost of \$2.50 each year, and the free miner must in each year do, or cause to be done, work to the value of \$100 on each claim.

A free miner is not entitled to hold more than one claim on the same vein or lode except by purchase.

A free miner was under the Act of 1891 not only entitled to work the mineral within his own claim (such claims being usually 1,500 feet long by 600 feet wide in a rectangular form), but was also entitled to some extent to follow veins or lodes in a downward course into adjoining lands without entering upon the surface of such adjoining lands. "The Mineral Act (1891) Amendment Act, 1892," however, declares that the owner of a mineral claim shall not be entitled to mine outside the boundary lines of his claim continued vertically downwards, but reserves the rights of claim-holders located under former Acts. "The Mineral Act (1891) Amendment Act, 1893," alters the size of mineral

AMERICA (NORTH)—*continued.*

BRITISH COLUMBIA.

claims to not exceeding 1,500 feet in length by 1,500 feet in breadth, and declares (s. 25) that the owner of a mineral claim is only entitled to the use and possession of the surface for the purpose of mining and getting the minerals. The holder of a mineral claim can purchase the same on payment of \$25 per acre in lieu of expenditure on the claim. Free miners may obtain licenses to run drains or tunnels for drainage or other purposes connected with the development or working of their claims through any occupied or unoccupied lands, whether mineral or otherwise, on giving full security for any damage that may be done thereby.

The "Placer Mining Act, 1891," regulates the rights and liabilities of "free miners" with respect to placer claims, which are very similar to those referred to above with respect to lode claims.

Under placer claims the free miners have the right to enter, locate, prospect, and mine for gold and other precious metals upon any lands in the province, whether vested in the Crown or otherwise, except upon Government reservations for town sites, land occupied by any building, or land within the curtilage of any dwelling-house, and any orchard or land lawfully occupied for placer mining purposes and Indian reservation.

Under the "Coal Mines Act, 1883" (as amended in 1890, and again by "The Coal Mines Amendment Act, 1892"), a twelve months' prospecting license for 640 acres of unoccupied and unreserved coal or petroleum land may be granted by the Government on payment of \$50. The Lieutenant-Governor in Council may grant a lease of lands covered by a prospecting license for coal-mining purposes to any licensee who proves the discovery of coal on his land, for a term of 5 years, at an annual rent of 10 cents = 5*d.* per acre; and at the expiration of that term the lessee, on proving that he has worked vigorously under the lease, may purchase the lands at \$5 per acre, but the lease is not to be granted until the land has been surveyed. In addition to the rental a royalty of 5 cents per ton on merchantable coal, and 1 cent per barrel of petroleum raised, may be reserved, and other conditions may be made in the lease. Owners of adjoining claims (not exceeding 10) may consolidate their claims. The license is not transferable without notice being given to the Chief Commissioners of Land and Works.

Prospectors of mines may acquire such a portion of any Crown lands or lands held under pre-emption, or Crown grants, by any person or persons as may be necessary for affording communication with the seashore, or any river or public highway, together with a block of land not exceeding five acres at the terminus of such line of communication, such land only to be used for transporting, storing, and shipping coal, and for other purposes essential to the business of the mine. The conveyance of land so taken is not to include the minerals thereunder, except by the consent of the grantor. Prior to the acquisition of such land compensation is to be given to the person from whom it is taken, the amount of compensation, in case of dispute, to be settled by the arbitration of two arbitrators appointed by the parties, and an umpire appointed by the arbitrators. (The "Coal Mines Act," Statutes of British Columbia, 1883, c. 3.)

Under the "Mineral Act, 1884" (Consolidated Statutes of British

AMERICA (NORTH)—*continued*.

BRITISH COLUMBIA.

Columbia, 1888, c. 82), with amendments made in 1889 and 1890 (and which Act is, to a great extent, repealed by the "Mineral Act, 1891," before mentioned), the Lieutenant-Governor in Council may appoint Gold Commissioners for the whole province, or for any particular district therein. Within each district there is to be a "Mining Court," in which the Gold Commissioner is to act as judge. Such court is to have original jurisdiction, and a court of law and equity to hear and determine all mining disputes arising within its district, with power for the judge in certain cases to summon a jury of from three to five miners to assess damages.

Under "An Act to aid the Development of Quartz Mines" (Statutes of British Columbia, 1888, c. 66, s. 85), the Lieutenant-Governor in Council has power to expend public moneys in the erection and maintenance of crushing, chlorinating, and smelting works, and may grant sums of money by way of bonus to assist quartz mines already partly developed, and may grant a bonus to a company which shall erect a quartz mill or smelting works, or both combined.

The regulation and inspection of coal mines are provided for by "The Coal Mines Regulation Act, 1877," as amended in 1883 and 1890.

Under an Act passed in 1890 (c. 81) special provisions are made with respect to claims located within that portion of the province within which the Canadian Pacific Railway runs, before referred to as the "Railway Belt."

AMERICA (NORTH)—*continued.*

NEWFOUNDLAND.

Name	Minerals	Ownership	Remarks
NEWFOUNDLAND	Copper Iron pyrites, &c.	<i>In Crown</i> , except where land has been granted in fee simple.	Any person may search for minerals on any lands in the Colony, and if he finds them, may obtain a lease from the Crown; but if he does not <i>bonâ fide</i> lay out certain sums in developing the mines in each of the first five years of the lease, the mines revert to the Crown. Owner to be compensated for damage to surface and for easements.—(47 Vict. c. 2, & 48 Vict. c. 3, 1884 & 1885.)

The sum required to be expended in the first five years amounts in the aggregate to \$6,000. At the expiration of the five years, if the conditions have been performed, the grantee gets a grant in fee simple of the minerals (excepting gold) within an area not exceeding one square mile, and a freehold grant of fifty acres of surface land within such area. (*See Evidence of Sir James Winter to the Mining Royalties Commission.*)

The import duties charged in Newfoundland seem more favourable to this country on the whole than those charged in the Dominion of Canada, *e.g.* :—

Iron in pig is free.

„ bars, sheets, plates, &c., 10 per cent. ad val.

Coal, per ton 80 cents = 1s. 3d.

Goods, wares, and merchandise not otherwise specified (apparently including lead and copper, raw or manufactured, with some slight exemptions), 25 per cent. ad val.—From Return of Colonial Tariffs, presented to Parliament June 1891.

AMERICA.

(Central.)

BAHAMAS, HONDURAS, &c.

Name	Minerals	Ownership	Remarks
BAHAMAS.	—	—	There do not appear to be any special mining laws or regulations in this colony.
BRITISH HONDURAS	Trace of gold Silver and coal	<i>In Crown</i>	All mines and minerals (including coal) are reserved to the Crown, with the right to enter and take, subject to compensation for damage to land or buildings, to be determined, in case of dispute, by arbitration.—(Consolidated Laws of British Honduras, part 34, c. 103, s. 42.)
JAMAICA. . .	Gold Copper Cobalt Lead Man- ganese	<i>In surface-owners</i>	Limited owners have power to lease mines for fifty years.—(Laws of Jamaica, 18 Vict., c. 32.)
LEEWARD ISLANDS	Gold Silver		There do not appear to be any special mining laws or regulations in these Colonies.
ST. LUCIA	Iron		
TRINIDAD	Copper		
WINDWARD ISLANDS	Tin Platinum		
BARBADOS	Coal (poor quality)		

In one of the Leeward Islands (Dominica) an import duty of 5s. per ton is charged on coal and patent fuel; and in another (Montserrat) an import duty of 2s. per ton is charged on coal exclusive of package, whilst in Barbados an import duty of 2s. 6d. a ton is charged on coal and the mixed preparations thereof and coke.—Return of Colonial Tariffs, presented to Parliament June 1891.

AMERICA.
(South.)
BRITISH GUIANA, &c.

Name	Minerals	Ownership	Remarks
BRITISH GUIANA	Gold and Silver	<i>In Crown</i>	Governor may give concessions or licenses to persons to work gold, silver, or any valuable mineral other than precious stones on private lands, subject to regulations to be made securing compensation for damage to surface, and determining the amounts to be paid for royalties, &c., to the Colonial Government.—(Ordinance of British Guiana, No. 4 of 1887.)

Under the Gold Mining Regulations, the annual rent appears to be \$1 for each acre of land above 50 acres included in the concession, merging in a royalty of 90 cents for each oz. of gold, and 4 cents for each oz. of silver.—(See Gold Mining Regulations under Ord. 4, 1887, ss. 59 and 78. Pound's "Mining Law of British Guiana," Suppt. 1888.)

Name	Minerals	Ownership	Remarks
FALKLAND ISLANDS	Coal, but apparently none worked at present. See Falkland I. Blue Bk., 1891.	<i>In surface-owner</i>	The waste lands of the Crown are to be sold in fee simple and by public auction only, though licenses may be obtained for temporary occupation for pastoral purposes, provision being made for reservations in leases.—(Falkland Island Ordinance, No. 4 of 1871.)

AUSTRALASIA.

The mining legislation of Australasia is so extensive and complicated that it could not be completely summarised in any small space; all that can here be attempted therefore will be to furnish an outline of the system which prevails throughout the principal Colonies of Australasia, adding some short reference to the minerals which are found, and to the special details of the legislation regulating the subject, in each separate Colony.

As in the case of the other Colonies, it is always necessary to bear in mind the distinction which exists with reference to the ownership of minerals between *private lands*, which have been granted in *fee simple* without any special reservation, and *Crown lands* (or unappropriated public lands), to which most of the mining legislation, except that which relates to the regulation and inspection of mines, has alone reference. It is, however, to be observed that, owing to the reservation by common law of the precious metals and of the special reservations in recent times of other minerals from grants of Crown lands, a special form of legislation has of recent years sprung up in the Australasian Colonies with respect to *mining on private property*, which enables land granted by the Crown to be resumed or otherwise taken for the purpose of working the reserved minerals subject to compensation to the grantee in respect of the land so resumed or taken. In other respects the rights of owners of private lands in the Australasian Colonies are similar to those of the owners of land held in *fee simple* under the ordinary *common law* in England.

As regards the *Crown lands*, it is necessary, in order to convey any distinct idea of the mineral system adopted, to give a general description of the mode in which such lands are usually dealt with.

Crown lands in the Colonies are "alienated," or pass from the ownership of the Crown to that of individuals, in various ways. Although differing to some degree in detail in the separate Colonies, the several Land Acts bear a strong resemblance to each other, and, generally speaking, provide for the alienation of Crown land either by direct sale or by sale under a deferred system of payment, the latter system being generally coupled with conditions as to improvements to be made on the land. The precise rules and regulations governing the sale of land vary in character and detail, not only in each Colony, but often in different divisions of the same Colony, and are much too numerous and diversified to be even referred to here in detail; but the following review of the general features of the Land Acts will give an idea of the usual practice.

AUSTRALASIA—*continued*.

SALES.

The Land Acts invariably provide for the sale outright of Crown lands, but usually limit the acreage to be offered for sale in any one year. The lots for sale are classified according to their situation and adaptability for particular purposes under various heads, such as town, suburban, or country areas.

The mode of purchase is also subject to variation, and includes *purchases at auction* with immediate (or in certain cases deferred) payments of purchase-money, and *conditional purchases* under a system of deferred payments extending over a term of years, subject to the fulfilment of conditions usually relating to fencing and improvements, and occasionally requiring residence on the land purchased. There are also cases (as in South Australia) of Crown lands being leased with the right of purchase after a certain portion of the term has expired, as well as of perpetual leases with a provision for the readjustment of rentals at the end of certain fixed periods.

Unconditional sales are almost always at auction, a deposit of 20 to 25 per cent. of the purchase-money having to be made at once, and the balance paid in a month from date of sale.

Conditional purchases can generally be made in areas which are proclaimed open for such purposes at fixed rates and periods for payment, power being given after the conditions are fulfilled for the balance to be paid in a lump sum if desired.

LEASES.

It is the general custom to lease Crown lands for different purposes such as agricultural or pastoral holdings and for various other occupations.

In mining districts leases are granted for residential and business purposes, often carrying the right to purchase, subject to certain sums having been expended on improvements.

Special leases are also granted for a variety of purposes.

LICENSES.

Temporary or occupation licenses are also granted for the occupation of lands which may be open for sale or lease, and are determinable at short notice as the land is required. The fact of land being held under annual lease or occupation license does not bar it from conditional purchase.

AUSTRALASIA—*continued*

MINERAL LANDS.

When lands are known or believed to contain gold, they are usually proclaimed as "gold-fields" in the Government Gazettes, and then become wholly or in part exempted from conditional purchase as agricultural or pastoral lands.

Voluminous "Mining Acts" have been passed in each of the principal Australian Colonies in recent years; and these have been altered or remodelled and amended to an extent which is positively bewildering. Thus the Victorian "Mines Act 1890," containing 399 sections and supplemented by numerous schedules and regulations, having themselves the force of law, repealed no less than 19 Acts previously passed relative to mining since the commencement of 1865; and has itself already been amended by no less than six Acts passed up to the end of 1892. In New Zealand again, at least 29 Acts, directly relative to mining, and supplemented as before mentioned, have been passed within the last twenty years. This frequent change of legislation on the subject of mining is not altogether owing to continual change of the prevailing ideas, but is no doubt attributable in a great degree to the changed conditions under which mining has been carried on since the early days of the Colonies, when it was mostly shallow, alluvial gold mining, whilst now the chief part of the gold is obtained by "quartz reefing," and at the same time the mining industry has extended to a great many metals and mineral substances besides gold, including coal and other combustible substances. A considerable number of the Mining Acts have no doubt been repealed; but, as the repealing Acts invariably provide that the repeal shall not affect rights which have been acquired under the repealed Acts, it is still necessary to have regard to the whole of the Mining Acts in order to obtain a complete knowledge of the subject of the mining legislation of Australasia. The Legislatures usually deal separately either by distinct Acts or by different divisions of the same Act with the subject of (*a*) gold mining (*b*) mining for other minerals or metals except coal (*c*) mining for coal (*d*) mining on private property (*e*) drainage of mines (*f*) mining companies, and (*g*) inspection and regulation of mines. It may, perhaps, be sufficient here to refer to the legislation of New South Wales (as being the Colony showing the most varied and valuable mineral production) in some detail, followed by shorter references to the mining legislation of the othersix Colonies of Australasia, calling attention only to the special points in which they differ from the legislation of the former Colony. The table at the end of this chapter, on pp. 306 and

AUSTRALASIA--*continued*.

307, has been prepared with the view of showing in a convenient form the chief distinctive features of the different mining legislations of the principal Australasian Colonies.

NEW SOUTH WALES.

Name	Minerals	Ownership	Remarks
NEW SOUTH WALES	Gold Silver Copper Tin Coal Iron Antimony &c., &c.	As to minerals other than gold and silver, in the case of lands granted before 1884, generally <i>in surface owner</i> , ¹ and in the case of lands granted since that date, <i>in Crown</i> .	All grants of Crown lands made since 1884 are to contain a reservation of all minerals in such land, but, wherever land has been alienated, subject to a reservation of the minerals to the Crown, the Governor may permit the owner of the land to remove such minerals upon payment of such royalty and upon such conditions as may be prescribed. ("The Crown Lands Act, 1884," New South Wales Stat., 48 Vict., No. 18, s. 7.)

(a) GOLD MINING.

**Manage-
ment and
regulation.** "The Mining Act, 1874,"² vested the administration of all matters relating to mining on Crown lands in a Minister for Mines to be appointed by the Governor, with power to appoint an efficient staff of officials (s. 7); and pro-

¹ The position before 1884 appears (from the evidence given before the Mining Royalties Commission) to have been as follows, viz.: Originally, when all the grants were made by Orders in Council—that is, before 1861—they did not contain similar reservations; some contained reservations of minerals and some reservations of roads in addition; but in 1854 a proclamation was issued by the Governor, cancelling all reservations of *coal*. Under the Act of 1861, minerals were reserved from sales of agricultural land, but could be acquired by the surface-owners on paying £2 per acre and expending £2 per acre on mining, which power was extensively exercised.

² 37 Vict. (N.S.W. Stat.), No. 13.

AUSTRALASIA—*continued.*

NEW SOUTH WALES.

vided for the establishment of a school of mines and mineralogical museum (s. 8); divided the goldfields into eight mining districts and empowered the Governor to direct subdivisions or establish additional mining districts (ss. 9–10); to declare any Crown lands in the Colony to be a proclaimed goldfield; to fix or vary the boundaries of districts or divisions or goldfields (s. 10); and to appoint wardens and other officers in the various mining districts, with a provision that such wardens and officers should not hold any share or beneficial interest in any mining adventure in the Colony (s. 11). Also to issue documents called “miner’s rights” to any person applying for the same, to be in force for any period not exceeding 15 years, on payment of 10s. per annum (s. 12).

The holder of a miner’s right is entitled for the purpose of gold mining, and in accordance with the regulations in force from time to time, to enter upon and occupy Crown lands, and thereupon to reside, and to construct and use water courses, dams, and reservoirs, and to take or divert water, making compensation for any damage caused thereby to the owner or occupier of any freehold land. He is also entitled to exercise easements, erect buildings, and for that purpose to get and use timber and stone, to make tramways and other ways, and to have the absolute property in all gold found on such land during the continuance of such right; and any holder of a miner’s right may take possession of Crown lands for gold mining, not only for himself, but also on behalf of any number of persons collectively, not exceeding five, each owning a miner’s right (s. 15). The portion of Crown land taken possession of and occupied under a miner’s right for the purpose of mining for gold is called a “claim,” as distinguished from land held for mining purposes under a lease. All claims must be registered in the office of the mining registrar of the district in which they are situate within a month after the occupation has commenced, under a risk of penalty for unauthorised mining on Crown lands, and being deemed to have abandoned the claim, unless for good reasons the warden extends the period for registration for not exceeding 14 days (s. 16). After registration of a claim it may be divided into as many shares as the owner thinks proper, and such shares may be assigned on registration, subject to regulations; or the miner’s right may be assigned on endorsement by the registrar, and several adjoining claims may be amalgamated on similar registration (s. 17). Every share or interest in any claim or portion of land occupied for business or residence under the Act, and every interest created under or in pursuance of the Act,

Privileges
conferred
by a
miner’s
right.

AUSTRALASIA—*continued.*

NEW SOUTH WALES.

is to be deemed at law a chattel interest (s. 18). No legal proceedings can be taken in respect of claims, except by holders of miner's rights (s. 19). A shareholder is, however, not necessarily the holder of a miner's right ; but it is necessary that there should always be held by or on behalf of the owner or owners of a registered claim such a number of miner's rights as would originally have authorised the taking possession thereof (s. 20).

The Governor may also issue a "business license" to any person applying for the same on payment of 10*s.* for six months, **Business** or £1 for twelve months, entitling the holder during the **licenses.** continuance thereof to occupy, on any proclaimed gold-field, sites for residence and carrying on his business according to the regulations for the time being in force, with power to transfer such license on registration and payment of a fee of 5*s.* (ss. 21-3).

Miners' rights and business licenses may be renewed on application within a month from the expiration, and even within one month afterwards, on payment after seven days from the expiration of certain penalties (s. 24).

Crown lands dedicated to public purposes or *bond fide* used as a yard, garden, cultivated field, or orchard, or for other purposes specified in the Act, are exempted from occupation **General provisions as to occupation.** for mining purposes, except on payment of compensation (s. 25), and the Governor may at any time reserve any specific portion of Crown lands from occupation under the Act (ss. 25-6), but the Governor may give authority to the holders of miners' rights to occupy reserved Crown lands, or to construct drives thereunder, subject to such conditions or regulations as he may impose (s. 27). The Secretary of Mines may also give permission for the holders of miners' rights or leases under the mining Acts to mine under any street, road, navigable water, common or reserve, or under any harbour, estuary, bay, river, or creek, on being satisfied that such mining can be carried on without injury to the same or to adjoining property ; and wardens may give permission for the construction of sluice boxes, tramways, or culverts, on, over, or under any public road, street, or tramway, subject to conditions intended to protect the public and third parties against injury (ss. 28-9). Wardens may also permit any person to construct roads, ways, or other works, over or across, or through any workings constructed under the authority of any of the mining Acts ; but fourteen days' notice must be given by the person applying for the permission to the person interested in the work (s. 30).

The rights to *claims* acquired by virtue of miners' rights can

AUSTRALASIA—*continued*.

NEW SOUTH WALES.

only be retained on condition of observing certain conditions as to labour and otherwise, prescribed by the regulations ; in default of which, the right of the owner to the claim becomes forfeited, and it may be taken possession of by a third party under the formalities prescribed by the Regulations.

The Act of 1874, however, provides (s. 32) that a warden may on proof that (a) a claim is unworkable from any cause, or (b) that the owner or owners require to be absent from the neighbourhood for any sufficient reason or are incapacitated by sickness or other sufficient cause from working, or (c) that the supply of water is insufficient to permit profitable working of the claim, permit the suspension of work on the claim for any period not exceeding six months on the occasion of each application.

The holder of a miner's right, who desires to have a more secure title than he can obtain by the mere occupation of a claim, can apply for a lease of any Crown lands for gold-mining purposes, and may obtain a lease of an area not exceeding 25 acres for a term not exceeding 15 years, at a rent of £1 per acre, payable yearly in advance ; but, where the lease applied for is of a quartz vein or lode, the area is not to exceed 600 yards along the line of the lode, or 200 yards in width across the lode. Claims may also be converted into leases on similar conditions. On making the application and first payment of rent, the applicant may take possession of the land and mine thereon, but without prejudice to the rights of third parties ; and may proceed for trespass or otherwise before a warden against anyone who, except under a previous right, should occupy or interfere with the land (ss. 33-40). The actual procedure (provided for by the regulations) after possession has been taken, is to erect a notice board on the land and post notices on the public offices of the district, and within ten days and not less than three days after taking possession, to make an application in the prescribed form to the warden of the district for a lease of the land so taken possession of. The application must state when the applicant proposes to commence work, what number of miners are to be employed on the land, and what amount of capital is to be expended in the purchase and erection of machinery, and with the application is to be deposited a year's rent at the rate of £1 per acre, and a sufficient sum to cover the cost of survey. Notice of the application must then be sent in the prescribed form to the Under Secretary for Mines, and the Secretary of Mines has to judge of the reasonableness of the proposals, and, if not satisfied, may refuse the application (in which case the unexpended balance

AUSTRALASIA—*continued*.

NEW SOUTH WALES.

of the deposit is to be returned) and his decision is binding and conclusive on all parties. Questions of priority are to be determined by date of application, or, if the applications are concurrent, by lot. Objections may be raised to the issue of any lease according to the prescribed rules (which include a condition that every person objecting must deposit £5 towards payment of expenses); in case objections are made, both sides have to be heard by the warden, who must report to the Secretary of Mines, and the Governor may then grant or refuse the application, or grant the same in a modified form as he thinks fit. If there are no objections, or the objections are over-ruled, a lease is to be granted according to the prescribed form containing conditions as to payment of rent, employment of labour, payment of compensation for damage to adjoining lands, and otherwise, with power for the Secretary of Mines to declare the lease void on breach of the conditions. Lessees may determine leases by giving to the Secretary of Mines three months' notice of intention to do so, and the Governor has power to renew leases for any term not exceeding 15 years (ss. 33-55 and Regulations published on the 13th July, 1874). Under Regulations relating to gold-mining leases published on the 13th July, 1874, it is provided that any Crown land taken possession of with the view to obtain a lease, must be efficiently and continuously worked from the date of taking possession, until the application is granted or refused; *efficient work* is defined as meaning the employment during the ordinary hours of labour on each day (Sundays and holidays excepted) of not less than two men upon a parcel of land containing four acres or less, and one additional man in respect of every two acres in excess of the said four acres contained in any parcel of land, under risk of having the application refused, unless there be a dispute as to the rights to possession of such land, in which case the warden may direct work to be suspended on the land until the rights of the parties have been ascertained.

(b) MINING FOR MINERALS, &C., OTHER THAN GOLD, and

(c) MINING FOR COAL.

The Governor may cause documents called "mineral licenses" to be issued to any persons on payment of 20s., to be in force for a year, conferring on the holder during that period similar rights and privileges in respect or in connection with mining for minerals, other than gold, as are conferred on holders of "miner's rights" in respect of mining for gold.

AUSTRALASIA—*continued.*

NEW SOUTH WALES.

The areas of Crown land, which may be occupied by virtue of such mineral licenses, appear to vary according to the nature of the minerals, and whether the object is to work or merely to search for minerals. In any case the land occupied must be defined by boundary marks and a notice board, and continuous and efficient working must be maintained, unless permission to suspend working is granted for sufficient reason by the Secretary for Mines or a warden. Within 30 days after the discovery of the mineral sought for, a mineral lease must be applied for under pain of forfeiture. Any holder of a mineral license may occupy for residence purposes a quarter of an acre of Crown lands, and may take, divert, and use water for mining or domestic purposes. (Regs. pub. 12th March, 1885.)

Under "The Mining Act, 1874," the Governor may grant leases of any Crown lands for the purpose of mining for any metal or mineral other than gold, the maximum area being, for coal 640 acres, and for minerals other than coal (or gold) 80 acres, the terms of leases not to exceed 20 years, renewable for a further period of twenty years; the rent being 5*s.* per acre, payable in advance, and in addition a royalty of not less than 6*d.* per ton on all coal raised.¹ The procedure after taking possession is similar to that in the case of gold leases, but the application must be made forthwith after taking possession. Mineral lots are to be measured in the form of a square, unless a Minister authorises a departure from that form. Lessees are bound to expend at the rate of £5 per acre on their lots within the first three years of the lease. Lessees may determine their leases on giving to the minister three months' notice of their desire to do so. On renewals a fine of not less than £2. 10*s.* per acre must be paid. The form of lease,² provided for by the regulations, contains conditions as to employment of labour and otherwise, as in the case of gold-mining leases, together with power for the Secretary of Mines to declare the lease void on breach of the conditions; but it is provided that, if a lease is forfeited or not renewed, the lessee is to be at liberty within six months from the termination of his lease to remove or otherwise dispose of all machinery, and improvements, and the minerals brought to the surface during the term of his lease. Adjoining lots may be amalgamated by the authority of the Minister of Mines upon payment

¹ N.S.W. Crown Lands Act 1884 (48 Vict., No. 18, s. 91).

² A special form of lease is in use, applicable to Crown lands under tidal waters. Abstracts of the forms of lease are set out in the Appendix to the First Report of the Royal Commission on Mining Royalties.

AUSTRALASIA—*continued.*

NEW SOUTH WALES.

of a fee not exceeding 20s. for each lot so to be amalgamated (ss. 56–63 and Regulations published the 24th February, 1885).

All questions which can arise with respect to the enjoyment of the different rights with respect to minerals under the Mining Acts or relative to partnerships in respect of mining on Crown lands or mortgages or assignments of interests in mines are subject to the jurisdiction of the Warden's Courts, which are established as Courts of Record in each mining district, and which have also jurisdiction in all cases of debt or contract wherein the amount claimed does not exceed £50. Either party to proceedings before the Warden's Court can require two mining assessors to be associated with the warden in hearing the case. Appeals lie from the Warden's Court to the District Court sitting as a Mining Appeal Court with four mining assessors when required by either party, and there is a further appeal to the Supreme Court when the original claim or the property involved exceeds £50 in value.

Provision is made by the "Mining Act, 1874," for the election (by the holders of mining rights, gold-mining leases and business licenses) of a Mining Board consisting of not more than eleven members who should have power, subject to the provisions of the Act, and in respect of all matters not otherwise provided thereby, to make regulations from time to time for mining for gold to be in force in all the mining districts of the Colony, or in any such district or division thereof, or in any goldfield within the Colony or on any Crown lands as the Governor should direct. The regulations so made must be presented to the Governor for approval before becoming law, and may be for all sorts of purposes, such as determining the size and the mode of taking and holding possession of claims and the rights and obligations of the holders of claims between one another, both as regards their claims and as to the use of water and other easements and a variety of other matters too numerous to mention here (ss. 64–6). The regulations so made by the Mining Board with the approval of the Governor are commonly known as "by-laws."

(d) MINING ON PRIVATE PROPERTY.

Under "The Crown Lands Act, 1884" (48 Vict., No. 18, s. 45) any Crown land within a proclaimed goldfield which

AUSTRALASIA—*continued.*

NEW SOUTH WALES.

had been sold after May 25, 1880,¹ or which should be there-
 Resumption after sold under "The Crown Lands Act, 1884," is
 of land for declared to be subject to the condition that any person
 mining. specially authorised by the Minister should be at
 liberty to dig and search for gold within such land, and, should it
 be found to be auriferous, the Governor might cancel wholly or
 in part the sale of such land, subject to compensation being made
 to the proprietor for the value of the land as if it were not
 auriferous and of the improvements thereon, and that such land
 should thereupon become Crown lands; but that the person so
 specially authorised to dig or search for gold should be deemed the
 first applicant for a claim or lease of such land or a portion thereof.

The principle so established has been extended by the
 "Mining Act of 1889" (53 Vict., No. 20), whereby any Crown
 land which should be thereafter sold, or any land which should
 have been or should thereafter be leased conditionally under the
 "Crown Lands Act, 1884," or any Act amending the same, is
 declared to be subject to the condition that any person specially
 authorised by the Minister should, on depositing a sum of money
 to cover surface damage, be at liberty to dig, search for gold or
 other minerals within such land, and, should the search be suc-
 cessful, the Governor might cancel wholly or in part the sale or
 lease of such land subject to compensation being made to the
 proprietor for the value of such land or his interest therein and
 of the improvements thereon, but exclusive of the value of gold
 or other minerals therein, and that such land should thereupon
 become Crown land; but that the person so specially authorised to
 dig or search for gold or other minerals should be deemed the first
 applicant for a claim or lease of such land or a portion thereof.

In other respects, when the proprietor of the soil is also
 owner of the minerals, the conditions of things are exactly the
 same as in England, and the proprietor sells or leases his mines
 on the best terms he can get.—*See Evidence of Mr. Abigail*
(formerly Minister of Mines for N.S.W.) and Mr. Stephen in
the 4th Report of the Mining Royalties Commission.

(e) DRAINAGE OF MINES.

There does not seem to be any special Act in New South
 Wales to regulate the relations of adjoining mine-owners with
 respect to the flow of water or otherwise; but the forms of Crown

¹ This is the date of an Act (Stat. of N.S.W. 48 Vict., No. 29) which declared (s. 29) that any future sales of Crown lands within a proclaimed goldfield should be subject to a similar condition to that referred to above as being provided for by sec. 45 of the Act of 1884.

AUSTRALASIA—*continued.*

NEW SOUTH WALES.

leases issued in accordance with the regulations reserve the right to the Crown and its assigns to make and use in, on, or under the land comprised in the lease any levels, drifts, &c., for freeing or keeping free any other lands and mines from water, or for conveying water to any other lands or mines, or for supplying any other mines with fresh air, or for effectually working any other mines, or for any public purpose whatsoever.

(f) MINING COMPANIES.

The Act 24 Vict., No. 21, as amended by 34 Vict., No. 16, provides for the limitation of the liability of the shareholders in mining companies registered under such Acts to an amount not exceeding the amount (if any) unpaid on the shares, and provides for the carrying-on and winding-up of such companies. The N.S.W. "Companies Acts of 1874 and 1888," which usually govern companies in N.S.W., do not apply to companies formed for mining purposes under the Act 24 Vict., No. 21, before referred to.

(g) REGULATION AND INSPECTION OF MINES.

The Act 39 Vict., No. 31 (passed in the year 1876), makes similar provisions for the regulation and inspection of coal mines and collieries to those contained in the English Coal Mines Regulation Act, 1872; whilst Regulations for the Inspection and Regulation of Mines other than Coal and Shale Mines, were published at Sydney on the 10th of August, 1876.

By "The Transfer of Mining Stock Stamp Duty Exemption Act, 1890" (Stat. of N.S.W. 54 Vict., No. 15) it is enacted that nothing in the "Stamp Duties Act of 1880" or in the first schedule thereto shall apply to any conveyance or transfer made after the 1st October, 1890, of any shares in the stock and funds of any corporation, company, or society carrying on only the business of mining for extracting or smelting any mineral or metal in New South Wales.

Import duties are charged in New South Wales in respect of some manufactured articles, *e.g.* :—

Duties on manufac- tures of minerals imported.	Iron, bolts, spikes, nuts, rivets, washers, gal- vanised, in bars, sheets or corrugated, per ton		<i>s.</i>	<i>d.</i>
	ton	.	40	0
	„ galvanised manufactures, per ton	.	60	0
	Wire netting (galvanised), per ton	.	30	0
	Pig iron, per ton	.	10	0
	Iron and steel wire (not galvanised) on free list.			

("Aust. Hand-Book" for 1893.)

AUSTRALASIA—*continued.*

QUEENSLAND.

Name	Minerals	Ownership	Remarks
QUEENSLAND	Gold Copper Iron Tin Coal	As to minerals other than gold and silver, in surface-owner.	All Crown grants are to contain a reservation of gold and silver.—Crown Lands Act, 1884 (Queensland), 48 Vict., No. 28; and The Minl. Lands Sales Act of 1892 (Qu. Stat. 56 Vict. No. 31).

The law as to mining in Queensland for gold is contained in "The Gold Fields Act, 1874" (38 Vict., No. 11), and "The Gold Fields Homestead Leases Act of 1886," and as to mining on Crown lands for minerals and metals other than gold and coal in "The Mineral Lands Act of 1882" (46 Vict., No. 8), "The Mineral Homestead Leases Act of 1891," and "The Mineral Land (Sales) Act of 1892" (Qu. Stat., 56 Vict., No. 31), and as to mining for coal on Crown lands in "The Mineral Lands (Coal-Mining) Act of 1886" (Qu. Stat. 50 Vict., No. 20), as amended in 1891, and in regulations made under the same Acts. The provisions of these Acts and Regulations appear to be on the same lines as those of the Acts and Regulations relating to mining on Crown lands in the other Australian Colonies; but a claim-holder or lessee is not entitled to carry on any mining operation, except at a depth of not less than 70 feet below the surface of any land which he is not entitled to occupy. The drainage of gold mines is provided for by "The Gold Mines Drainage Act of 1891" (55 Vict., No. 26) under which the Governor in Council may proclaim certain drainage areas with drainage boards for such areas, having power to construct or cause to be constructed works to prevent the flooding of mines within their drainage areas and to levy the cost of the construction and maintenance of such works from the owners of mines within their drainage areas, assessing the cost upon such owners in proportion to the benefit derived by the several mines from the works, and to levy special

AUSTRALASIA—*continued.*

QUEENSLAND.

rates for defraying the cost of drainage or pumping machinery, the contributions being payable under risk of forfeiture by the owners of their leases or claims.

Mining Companies are regulated by "The Mining Companies Act of 1886" (50 Vict., No. 19), and the working of mines by "The Mines Regulation Act of 1889," the first part of which relates to mines in general and the second part to collieries only.

Import duties are charged upon certain minerals or manufactures of minerals, *e.g.* :—

		<i>s.</i>	<i>d.</i>
Import duties on minerals or manufac- tures of minerals.	Iron castings for building purposes, &c. per cwt.	3	0
	Iron pipes (cast), iron wire, iron (corrugated or galvanised), lead (piping and sheet) per cwt.	2	0
	Coal, per ton	2	0
	Mineral oils, per gallon	0	6

and all goods not elsewhere specified 15 per cent. ad val., but iron ore, plain, sheet (not galvanised), pig, bar, rod from $\frac{3}{8}$ to $\frac{1}{2}$ inch, channel, angle and tee, rolled joints up to 10 by 5 inches, scrap and hoop and steel, rails, unwrought, sheet, bar, angle and tee, and steel wire rope are free.—Return of Colonial Tariff, presented to Parliament, June 1891, and "Austr. Hand-Book," 1893.

SOUTH AUSTRALIA.

Name	Minerals	Ownership	Remarks
SOUTH AUSTRALIA	Gold Silver Lead Copper Iron Tin &c.	Depends upon date of grant from Crown, all minerals being reserved to the Crown from grants made since 1888.	See below.

The law relating to gold mining on Crown lands in South Australia (except the Northern Territory) is contained in "The Gold Mining Act, 1885" as amended in 1886; and that relating to minerals other than gold (including coal, guano, petroleum, or other valuable substance or deposit, not being a metal or metalliferous ore) in "The Crown Lands Act, 1888," and in the regulations made under such Acts

AUSTRALASIA—*continued.*

SOUTH AUSTRALIA.

respectively. There is special legislation relating to Crown lands in the Northern Territory contained in "The Northern Territory Gold Mining Act, 1873" and "The Northern Territory Crown Lands Act, 1890."

The provisions of the law respecting mining on Crown lands do not differ sufficiently from those of New South Wales to render it necessary to refer to them fully, though some details will be found in the table given on p. 306, but it may be mentioned that the rent reserved in every mineral lease is 1*s.* per acre, and a further sum, equal to 6*d.* in the £. sterling on the net profits obtained from the working of the mine and the sale of metals and minerals, and that, for the purpose of ascertaining the amount of such rent, the mineral lessee or his manager has to send in to a Commissioner half-yearly returns, showing the gross and net profit which has resulted from the working of the leased land during the half year preceding, and for the purpose of verifying such returns the Commissioner may require the inspection of all books, accounts, &c., relating to the leased land, or the metals and minerals obtained therefrom (The Crown Lands Act, 1888, ss. 97-8). The leases are also granted subject to a condition that £6 per acre is to be spent in every two years of the term, or at the option of the lessee that one man per every 20 acres is to be employed for nine months in each year of the term; and the leases contain other conditions and are liable to be forfeited on breach of such conditions (s. 99).

"The Crown Lands Act, 1888," (51 & 52 Vict., No. 444), as amended by subsequent Acts, and "The Northern Territory Crown Lands Act, 1890," now regulate the alienation of Crown lands in the Colony of South Australia.

The history of legislation as to reservation of minerals from grants of Crown lands in South Australia is somewhat peculiar. Before the year 1877 it appears to have been considered somewhat uncertain what minerals passed by grants of Crown lands; but in that year an Act (No. 88 of 1877) declared that the grant in fee simple of any land in South Australia theretofore granted or thereafter to be granted, should be construed to include and to convey to the owner in fee simple of such land the absolute property in all mines and minerals, including gold and silver (commonly termed Royal metals), nothing whatever above or below the surface of the ground being reserved by the Crown. This Act was, however, repealed by the Crown Lands Consolidation Act of 1886, which declared (s. 9) that grants in fee simple of

AUSTRALASIA—*continued.*

SOUTH AUSTRALIA.

Crown land made after the passing of that Act were not to be construed to include or convey to the owner in fee simple for the time being of such land any property in *gold*, the same being reserved by the Crown, with power for a Crown Commissioner, and all persons at all times authorised by him, to enter on such lands and mine and remove therefrom any gold there found, making fair and reasonable compensation for any damage thereby sustained. The Crown Lands Consolidation Act of 1886 was again repealed by the subsisting Crown Lands Act of 1888, which declares (s. 9) that the grant in fee simple of any land thereafter granted shall not be construed to include or convey any property in any *gold, silver, copper, tin, or other metals, ore, mineral, or other substances containing metals, or any gems or precious stones, or any coal or mineral oil* in or upon such land, the same being reserved by the Crown, with power for a Crown Commissioner, and for all persons authorised by him, at all times to enter on such land and to search, mine for, and remove therefrom any of the metals and other things reserved there found, doing as little damage as may be to the surface, and making fair and reasonable compensation to the person or persons thereby damaged for any damage sustained (exclusive of the value of any metals or other things reserved as aforesaid) such compensation to be determined by valuation.

The successive repeals before referred to are expressly stated not to affect any grant or thing made or done under or in pursuance of the repealed Acts before the date of the repeal; it therefore follows that there are several classes of private lands in South Australia considered with respect to the reservation of minerals, viz., (a) lands held under the early grants, from which no minerals whatever (even gold) are reserved; (b) lands held under later grants, from which only gold is reserved; and (c) lands held under recent grants from which all metals and minerals are reserved. Notwithstanding the mineral rights conveyed by grants in fee simple under the circumstances before referred to, the following provision is now made to permit of gold mining being carried on upon any private land, no matter when granted.

Under the "Mining on Private Property Act, 1888" (51 and 52 Vict., No. 448)¹ the Governor, on behalf of the Crown, may provisionally resume the ownership of any private land for the purpose of mining for gold, on payment being made by way of purchase-money and compensation for land resumed, and for the

¹ It is understood that there is a proposition before the South Australian Parliament to alter this Act in the present Session.

AUSTRALASIA—*continued.*

SOUTH AUSTRALIA.

damage thereby occasioned, as if such land had been acquired under the Lands Clauses Consolidation Acts. The land may also be provisionally resumed, and licenses to mine may be granted at a royalty of $2\frac{1}{2}$ per cent. on the gross value of metal raised, and such royalty is, after a deduction of $2\frac{1}{2}$ per cent., to be paid to such person who, but for the resumption of such private land, would have been entitled to the first right to mine thereon. Private land may also be proclaimed to be an alluvial goldfield, in which case the owner can require the land to be absolutely resumed. The owner of private lands (unless prepared to mine in a *bonâ fide* manner himself) may also be compelled to grant a lease for the purpose of mining for gold; and, failing agreement, the royalty is to be at the rate of $2\frac{1}{2}$ per cent. on the gross value of the metal raised during the lease, and a rent is to be paid for the surface land to be assessed by the local court, the term to be 28 years, and the lease to comprise a convenient way to the land and provisions for preventing damage. Regulations were made under the last-mentioned Act on the 14th June, 1893.

Under the "School of Mines and Industries Act, 1892" (Stat. of S.A., 55 and 56 Vict., No. 560), a Council of the School of Mines and Industries which had been established in 1889 was appointed, and various rights and powers were relegated to such Council for the effectual carrying-on and conduct of such school.

Import duties on the manu- factures of minerals.	Import duties are charged in South Australia in respect of certain manufactured articles, <i>e.g.</i> :—	
	Galvanised iron, corrugated, unmanufactured,	<i>s</i> <i>d.</i>
	per ton	30 0
	Iron or steel columns, girders, rolled or rivetted, pipes, tubes, &c., per ton	40 0
	Lead, pipe and sheet, shot, per cwt.	2 6
	Iron brackets, doors, &c., and galvanised iron manufactures, 25 per cent. ad val.	

(Return of Colonial Tariffs, presented to Parliament, June 1891.)

Engines or parts (except gas, portable and traction engines), 25 per cent. ad val.

("Australian Hand-Book," 1893.)

AUSTRALASIA—continued.

VICTORIA.

Name	Minerals	Ownership	Remarks
VICTORIA . .	Gold . Copper Antimony Lead Tin, &c. Some Coal	As to lands alienated by the Crown before the 1st of March 1892, the property in all minerals (except gold and silver) is in the surface-owner; but since that date all minerals have been reserved from grants by the Crown.	See "The Mines Act, 1891 (No. 2)" (55 Vict., No. 1251), s. 3.

The history as to reservation of minerals from grants of land in fee simple by the Crown in the Colony of Victoria is as shortly stated above. The chief mineral product of the country being gold, the reservation of that mineral from all grants by the Crown has been a matter of great importance, and has resulted in legislation designed to render the reservation effective. As a matter of fact it is understood that since 1884 no lands then known to be auriferous have been alienated in fee simple, such alienation having been absolutely forbidden by section 66 of the Land Act passed in that year, which prohibition is continued by the corresponding section of the "Land Act, 1890."

Under "The Mining on Private Property Act, 1884,"¹ power was given to the owner of any private land, who had by himself or his agent mined for gold on such land within 6 months before the passing of the Act, to obtain a mining lease of an area of such land not exceeding the area authorised by the regulations therein referred to, and to have priority in his application within six months from the passing of the Act, subject to

¹ Repealed, but practically re-enacted by "The Mines Act, 1890."

AUSTRALASIA—*continued*.

VICTORIA.

which a lease might be issued to any other person, and lessees from the owners of private lands of the right to mine for gold or silver on such lands at the date of the Act, on registering their leases, were given for a limited period priority over other applicants for leases of such lands. If the lease was applied for by a third party, the owners and occupiers were to be entitled to compensation for damage to the surface and for severance and for all consequential damage, the amount to be determined by agreement or before a Warden or in the Court of Mines of the mining district in which the land taken possession of was situate. The owner was at liberty to agree with the lessee for the payment of a percentage, as royalty, on all gold extracted in lieu of compensation in any other form. The Act also provided that if mining operations were not commenced or were allowed to cease under a lease for the term of one year, the land was to revert to the owner. The Act also contained power for the Governor in Council to grant leases for the purpose of constructing necessary easements over private lands for the working of any gold mine, subject to compensation as aforesaid; land used as the site of buildings and for other specified purposes was not to be granted under the provisions of the Act, unless the freehold was purchased. Regulations incorporated in the Act provided for the hearing of objections to applications for leases and otherwise. The regulations incorporated in the Act of 1890 have since been amended (by Regs. dated the 20th Feb. 1893), providing as to the form of lease for mining on private lands.

As before mentioned, the legislation in the Colony of Victoria has been very voluminous, which fact is no doubt attributable in some degree to the altered conditions under which gold mining has been carried on since the early days of the Colony. In these days a considerable amount of capital has to be employed both in deep sinking and in erecting plant for the treatment of the quartz and extraction of the gold. For this reason the area which can be taken up by the holder of a miner's right on Crown lands is much larger than was formerly the case, and several claims can be "consolidated" so as to form one large tract of ground.

The majority of the quartz-reefing mines are understood to be held under lease as the tenure is more secure, and the claim cannot be so easily "jumped" on the non-fulfilment of any of the conditions of holding as in the case of mere "claims."

The Statute now regulating the subject of mining on Crown lands is "The Mines Act, 1890," 54 Vict., 1120 (as amended by

AUSTRALASIA—*continued.*

VICTORIA.

two Acts passed in 1891 and two Acts passed in 1892), which Act in fact consolidates all the Acts in force in the Colony at the date of the Act not only relative to mining on Crown lands, but also relative to gold mining on private lands. The general provisions of this Act relative to miners' rights and mining leases, licenses to search for metals and minerals other than gold, mining administration and otherwise, do not differ sufficiently from those in force in New South Wales to render it necessary to refer to them in much detail here, though some details will be found in the table given on p. 307. It may, however, be observed that no one is entitled to occupy land on a goldfield as a "residence area" (by which term is meant any Crown land on any goldfield not exceeding one acre in extent occupied by the holder of a miner's right or business license), unless such person is registered as the holder of such area, and of a miner's right or business license. A business license costs as much as £5 per annum.

The "Mines Act, 1890," contains certain provisions as to the drainage of mines, under which the owners of pumping machinery may require contribution from the owner of any mine for the drainage thereof with power to enforce such contribution through a warden.

Under "The Mines Act, 1891" holders of residence areas who have erected buildings or other improvements thereon, and been in possession thereof for at least two and a half years, have the option of purchasing the same if they should not be required for mining or public purposes; but such sale is only to include the surface, together with the earth below the same, down to such a depth, not exceeding 100 feet, as the Governor in Council shall determine.

Under "The Mines Act, 1891 (No. 2)," sec. 3, all gold and silver, and all metals, minerals and mineral ores on or below the surface of all land in Victoria not theretofore alienated from the Crown in fee simple are to remain the property of the Crown, subject to the provisions of the Mines Acts, notwithstanding that such land may at any time be alienated from or licensed or leased by the Crown; and, by sec. 5, power is given to the Governor to grant mineral licenses to search for and mineral leases to mine for minerals other than gold on any land alienated by the Crown in fee simple after the commencement of the Act (on March 1, 1892), or licensed or leased either before or after such commencement and to erect and occupy mining plant or machinery thereon, compensation being paid for surface damage to be done to such land by mining thereon (sec. 5), with power for a warden to

AUSTRALASIA—*continued.*

VICTORIA.

hear and determine questions arising as to such compensation (sec. 19).

Under "The Mines Act, 1892" (Stat. of Victoria, 56 Vict., No. 1263) the Governor in Council is not to except residence areas from occupation which are in fact occupied by the holder of a miner's right or business license, unless the holder shall receive compensation for the value of his interest in such area and of any buildings or improvements erected or made thereon.

The "Mines Act, 1890" also contains provisions as to the regulation of Mines and Mining Machinery, resembling the legislation on the same subjects of the other Australian Colonies; it also contains somewhat special provisions as to an "Accident Relief Fund" arising from public subscriptions, for the benefit of persons who were injured by an accident which occurred in the New Australasian Mining Co.'s mine at Creswick in the year 1882, under which trustees were incorporated for the purpose of dealing with the surplus of such subscriptions, and with any other moneys which might thereafter be voted by Parliament or subscribed by the public, for the relief of sufferers from mining accidents in Victoria. The law relating to Companies, including mining companies, is consolidated and fully set out in "The Companies' Act, 1890," (54 Vict., c. 1074).

Import duties are charged in Victoria on certain

Import
duties on
minerals
and manu-
factures of
minerals.

minerals and manufactures of minerals, *e.g.* :—

Charcoal and coal (ground), 20 per cent. ad val.

Lead, sheet and piping, per cwt. 2*s.* 6*d.*

Metals, manufactures of, and machinery N.E.S. (except portable engines), 35 per cent. ad val.

Some manufactures of metals and machinery are, however, free.—Return of Colonial Tariffs, presented to Parliament June 1891.

AUSTRALASIA—*continued.*

WESTERN AUSTRALIA.

Name	Minerals	Ownership	Remarks
WESTERN AUSTRALIA	Gold Silver Lead Copper Ironstone Coal, &c.	As to gold, silver, and other precious metals, in Crown. As to other minerals, apparently in surface owner.	Land Regulations (Western Australia) proclaimed 2nd March 1887, No. 16.

Up to the present time no reservations of minerals appear to have been made out of grants of land in Western Australia beyond that mentioned above.

Before 1890 power was reserved to Her Majesty by the Imperial Act, 18 and 19 Vict., c. 56, to make regulations as to the sale and disposal of the waste lands of the Crown in Western Australia, and under this power the regulations appear to have been made which are mentioned above.

By the "Western Australia Constitution Act, 1890" (Imp. Stat. 53 and 54 Vict., c. 26), s. 3, the entire management and control of the waste lands of the Crown in the Colony of Western Australia and of the proceeds of the sale, letting and disposal thereof, including all royalties, mines, and minerals, were vested in the Legislature of that Colony. By this Act the power before referred to as being reserved to Her Majesty of making regulations was taken away, and power was given to the new Legislature to repeal or make new regulations, but the regulations then existing were to continue in force unless repealed, and the Acts of the Legislative Council of Western Australia, entitled the Gold Fields Act, 1886, and the Gold Fields Act Amendment Act, 1888, were directed to take effect as if they were such regulations as aforesaid, and the subject of gold mining appears to be still regulated under the last-mentioned Acts. New regulations for the management of goldfields were made on the 4th October, 1892, to come into force on the 1st November following. Some details of the regulations respecting gold mining leases are given in the table, p. 307 *post*. In other respects the regulations appear to be similar to those of

AUSTRALASIA—*continued.*

WESTERN AUSTRALIA.

the other Australian Colonies. Mineral leases, other than gold, are obtainable as follows, viz. :—

Under “The Mineral Lands Act of 1892” (Stat. of Western Australia, 55 Vict., No. 3), holders (who must not be Asiatics or Africans) of mining licenses costing 10*s.* per annum, may search for minerals on Crown lands subject to certain regulations, and may obtain leases of Crown lands within proclaimed mining districts for various areas not exceeding in the case of coal 640 acres, for terms not to exceed 21 years, and at rentals at the rate of 5*s.* per acre or part of an acre, except in the case of coal, which is to be at the rate of 6*d.* per acre or part of an acre, and a royalty of 3*d.* per ton on the coal raised during the first ten years of the term, and 6*d.* per ton afterwards. Regulations were made under the last-mentioned Act, dated the 29th June, 1892.

Persons found working for minerals or removing minerals or mineral ores from the claim, lease, or land of any other person who is personally or by his agents occupying the same, whether held under mining license, or lease, or in fee, may be fined any sum not exceeding £50 for each offence, and be held guilty of larceny (ss. 29, 30).

Import duties on manufactured articles. An import duty of £2 per ton is charged in Western Australia on galvanised iron (corrugated sheet).

		<i>s.</i>	<i>d.</i>
Iron and steel wire, per ton.	.	10	0
Lead (sheet, pig, and piping), per cwt.	.	2	6
Mineral oils, per gal.	.	0	6
Engines and machinery (with certain exceptions), zinc, tin, &c., 5 per cent. ad val.			

(“Austr. Hand-Book,” 1893.)

Name	Minerals	Ownership	Remarks
NEW ZEALAND	Gold Silver Copper Iron Tin Antimony Petroleum Coal and Lignite, &c. &c.	As to minerals other than gold and silver, in surface - owners, where land has been granted by Crown in fee; but land granted previous to 1873 (in which year an Act was passed providing that all lands alienated by the Crown after that date should be subject to resumption for mining purposes) may with the consent of the owners or occupiers thereof, and all lands alienated by the Crown after that date may, without such consent, be resumed by the Government for mining purposes (not including coal mining) on payment to the owners of full compensation for the value (otherwise than auriferous or argenteriferous) of the lands and improvements resumed; and lands may also be resumed for coal-mining purposes on the conditions mentioned below.	The Mining Act 1891 (New Zealand), 54 & 55 Vict., No. 33, as amended by The Mining Act Amendment Act (N.Z.), 1892, and The Mining Act Amendment Act, 1893 (Stat. of N.Z. 57 Vict., No. 9), and The Mining Act Amendment Act (No. 2), 1893 (Stat. of N.Z. 57 Vict., No. 49). The Coal Mines Act, 1891, 54 and 55 Vict. (New Zealand), No. 46, amended by The Coal Mines Act Amendment Act, 1893 (Stat. of N.Z. 57 Vict., No. 50).

AUSTRALASIA—*continued.*

NEW ZEALAND.

The laws of New Zealand relating to mines are consolidated and amended by the above-mentioned Acts. As has before been observed, the legislation of New Zealand on the subject of mines has been very extensive, and, though the earlier Acts have been repealed, it is still necessary to have regard to such Acts with respect to anything which may have been done under the authority of such Acts.

A special feature of New Zealand legislation with reference to minerals is that, although it has not provided for any reservations of minerals from grants of Crown lands, power was given from an early date by "The Resumption of Land for Mining Purposes Act, 1873," for the Crown to resume any land (except lands alienated expressly for mining purposes) which might be alienated after the date of that Act for mining purposes, on payment to the owner of the land for the value other than auriferous or argentiferous thereof, such value in case of difference being ascertained by arbitration. Any applicant for resumption of such land under the Act of 1873 had to prove that the land contained gold and silver, and that it might be mined at a reasonable profit, and questions as to the right to resumption were to be determined by the Superintendent of the Province on the report of a warden after due inquiry.

The Act of 1873 was repealed by "The Resumption of Land for Mining Purposes Act, 1882," which, however, contains provisions to much the same effect as the Act of 1873, except that the later Act contains a definition of the term "Mining Purposes," which is declared to mean and include, in addition to the meaning attached to such expression by any Act in force relating to mining for gold and silver, the right to resume land which might be upon the margin of any stream or water, and any land which might be required for or intended to be used as a site for a tail-race, water-race, dam, reservoir, sludge-channel, machine site, or for any other purpose connected with mining for gold and silver; and under this Act it became sufficient for an applicant to prove that the land was required for mining purposes, without necessarily proving that it contained gold and silver.

The Act of 1882 was again repealed by "The Mining Act, 1886," which relates to metals and minerals, except coal, and which declares that all land alienated by the Crown since the Act of 1873, and all lands alienated previously to that date, with the consent of the owners, should be liable to be resumed for mining purposes (except lands alienated expressly for mining purposes), upon similar conditions as were imposed by the previous Acts.

AUSTRALASIA—*continued.*

NEW ZEALAND.

By "The Coal Mines Act, 1886," it was provided that where, for the purpose of working any mine, it was required to carry any work on, or over, or under any private land, or to take any such land, or any part thereof, for mining works in connection with such mine, the Governor, on the application and at the proper cost and charges of the owner of such mine, might take such land, or any part thereof, under "The Public Works Act, 1882," as for a public work within the meaning of the last-mentioned Act, which provides for full compensation to every person having any estate or interest in lands taken for public works or injuriously affected thereby.

The two last-mentioned Acts of 1886 are repealed by "The Mining Act, 1891" (which does not extend to coal mining), and "The Coal Mines Act, 1891." The provisions of "The Mining Act of 1886" with regard to resumption of land are, however, in effect re-enacted by the "Mining Act, 1891," as since amended by "The Mining Act Amend. Act, 1892," but by means of a wider definition clause in the Act of 1891 it would appear that land may be resumed under the provisions of that Act, not only for the purpose of mining for gold and silver, but also for the purpose of mining for any other metal or mineral except coal, and for the erection of machinery and the construction of works, and the doing of all lawful works incident or conducive to any such mining.

As regards coal mining, "The Coal Mines Act, 1891," provides that all lands which before that date had been alienated by the Crown might with the consent of the owners or occupiers thereof, and all lands which after that date should be alienated by the Crown (except lands alienated expressly for coal mining purposes), might without such consent be resumed for coal-mining purposes on payment of full compensation to the owner and occupier thereof for the value of the lands and improvements so resumed, and that any such resumption might be made by the Governor under "The Public Works Act, 1882," as if it were a taking of land for a public work within the meaning of that Act, and the compensation ascertained under that Act. Power is also given to the Governor to contract with the owner or lessee of any coal mine situate on private lands, for the acquisition of such lands and mine on reasonable terms, or for the purchase of the interest of any lessees of coal mines on Crown lands on payment of compensation for the same, including value of good will, if any; but no resumption under the Act is to be complete or take effect until a resolution of the

AUSTRALASIA—*continued.*

NEW ZEALAND.

Legislative Council and the House of Representatives has been passed sanctioning the same. The provisions as to works on private lands contained in the "Coal Mines Act of 1886," are in effect re-enacted by the "Coal Mines Act, 1891."

It therefore appears that there must be various classes of private lands in New Zealand considered with reference to the power of resumption for mining purposes, *e.g.* (a) Lands granted before 1873, which cannot be resumed for any mining purpose without the consent of the owner, except for the construction of works required for coal mining, (b) Lands granted between 1873 and 1891, which can be resumed for the purpose of mining for metals and minerals other than gold, and for works connected with coal-mining, but not for the purpose of mining for coal, and (c) Lands granted since 1891, which may be resumed for the purpose of mining for any metals or minerals, in all cases on payment of full compensation to the owners and occupiers of the lands.

"The Land Act, 1892" (N. Z. Stat. 56 Vict., No. 37), which is the Act now regulating dealings with the unappropriated Crown lands for agricultural and pastoral purposes, provides that the Governor in Council may, by proclamation, resume any land held under *lease or license* under the Act which in his opinion is required for any public purpose, or which may be deemed by him to be auriferous or argentiferous or required for mining or coal-mining purposes, subject to compensation being paid to the lessee or licensee for substantial improvements on the land.

The provisions of the Mining Acts and of the rules and regulations thereunder which are in force in New Zealand, with respect to Crown lands, are similar to those which are in force in the other principal Australasian Colonies, and it is not proposed to refer to them in detail here, though some particulars are given in the table printed on p. 307. The only very noticeable difference between the conditions of mining in New Zealand and the other principal Colonies of Australasia is that in the former (except as mentioned below) gold is subject to an export duty of 2s.¹ an ounce (equal to about $\frac{1}{37}$ th of the value) whilst in the other principal Colonies no royalty or export duties are charged for gold mining on Crown lands, though miners' rights and fixed rents are charged in all of them.

Under "The Gold Duty Abolition and Mining Property Rating Act, 1890" (No. 35), the export duty on gold was abolished as regards the South Island, and in lieu thereof all

¹ See N.Z. Customs Duties Consolidation Act, 46 Vict., No. 56, s. 4.

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mining property in that island was declared liable to be rated by the local authorities.

“The Mines Act, 1891,” and “The Coal Mines Act, 1891,” consolidate the law as to the regulation and inspection of mines and mining machinery in New Zealand, and the former Act contains provisions requiring the owners of mines (other than coal-mines) to contribute to the expense of raising water by machinery, which benefits their mine, with power for the Governor to make regulations establishing Drainage Boards in different areas, and prescribing their rights as to executing drainage works, levying contributions and otherwise within such areas. The same Act also contains elaborate provisions enabling holders of miners’ rights to divert and use water on Crown lands for gold mining or for their own domestic purposes, and empowering wardens to grant licenses authorising the cutting of water races and the diversion of water upon Crown and private lands for a variety of purposes connected with quartz gold-mining and the drainage of mines, and subject to compensation being paid before entry on private lands, with power for County Councils and Borough Councils to hold and act under such licenses. Various other matters are provided for by this elaborate “Mining Act of 1891,” which is also supplemented by lengthy regulations promulgated on the 29th December of the same year.

Miners’ rights are not transferable (Mining Act, 1891, s. 25), but a consolidated miner’s right may be taken out by one person or company on behalf of others on payment of a sum equivalent to the number of miners’ rights which the consolidated right is to represent (s. 27). All transfers and assignments of licensed holdings or special claims for gold-mining purposes must be registered at the Warden’s office (Reg. No. 20), and the same rule applies with respect to transfers of mineral licenses for metals or minerals other than gold, silver, or coal (Reg. No. 51). Claims not being licensed holdings may be amalgamated on application to the Warden provided that the amalgamated claims do not exceed 30 acres, and that it is proved to the satisfaction of the Warden that such amalgamation is expedient or necessary for the efficient working of the ground (Reg. No. 50). As to coal leases, the consent of the Minister of Mines is required before the assignment or transfer (Coal Mines Act, 1891, s. 8), and the amalgamation or consolidation of coal leases is only permitted with such consent and sub-

AUSTRALASIA—*continued.*

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ject to the right of veto by Parliament (s. 10). In New Zealand, however, as elsewhere, there seems to have been a tendency for the mines in particular districts to get into a few hands. The Blue Spur and Gabriel's Gully Consolidated Gold Company, Limited, was formed in 1888 to acquire as going concerns and amalgamate the whole of the Blue Spur Gold Mining Companies, situate near Laurence, in the provincial district of Otago, New Zealand. The purchase-money, originally fixed at £115,000, was afterwards altered by various arrangements, reducing it in the result to £96,000 paid in cash and ordinary shares; whilst the Westport Wallsend Coal Company, Limited, formed in 1889 to acquire certain collieries and coal deposits in Westport, New Zealand, have a property now comprising an area of 5,518 acres.¹

"The Coal Mines Act, 1891," amended by "The Coal Mines Act Amendment Act, 1893," contains some rather special features, which perhaps should be noticed here, *e.g.* :

The Act provides (sec. 64) that in the event of any dispute arising between any miners and the owner or agent of any mine as to any general or special rules or additional special rules, or between the parties aforesaid and the Inspector of Mines as to the administration of the rules or upon any matter within the scope of the Act, not being an offence and not otherwise provided for, the matter in dispute may be referred to arbitrators appointed by the parties on each side respectively, and an umpire to be appointed by such arbitrators.

The Act also provides (sec. 65) that if the owner of any mine where there is an accumulation of water wilfully or negligently permits any water to flow or percolate into any adjoining mine to the injury thereof, he shall be liable to pay to the owner of such adjoining mine a contribution towards the cost of draining it.

The Act also provides (sec. 69) that the owner of every mine, whether situate on private lands or Crown lands, in addition to the conditions for the payment of any royalty, is to contribute to a fund for the relief of coal miners who may be injured whilst working in coal mines, and for the relief of the families of coal miners who may be killed or injured whilst so working, a sum equal to $\frac{1}{2}d.$ per ton on the output of bituminous coal, and $\frac{1}{4}d.$ per ton on the output of lignite, by quarterly payments in the year to the credit of "The Sick and

¹ "Burdett's Official Intelligence," 1893.

NEW ZEALAND.

Sec. 88 of the Act provides that all contracts for the supply of coal are to be suspended during strikes.

Mining Companies.

Import duties are charged in New Zealand on various kinds of manufactures of minerals, *e.g.* :—

Iron fencing wire, the cwt.	.	.	1	0
Barbed " "	.	.	2	0
Galvanised, corrugated sheets, screws, and nails, the cwt.	.	.	2	0
Lead, in sheets, the cwt.	.	.	1	6
" piping "	.	.	3	6
Colonial Tariffs, presented to Parliament June 18				
Oil, mineral, per gallon	.	.	0	6
Machinery, with certain exceptions, 20 per cent. ad val.				
Zinc, 20 per cent.; manufactures of, 25 per cent.				

(Return of Colonial Tariffs, presented to Parliament June 1891.)

(“Austr. Hand-Book,” 1893.)

TASMANIA.

Name	Minerals	Ownership	Remarks
TASMANIA . .	Gold Silver Coal Iron Tin ¹ Lead, &c.	As to land granted before 1890, mines other than gold and silver, apparently in surface owner; but grants of Crown land since that date within certain areas contain a reservation to the Crown of the right to mine at a depth of not less than 50 feet from the surface; and lands granted since 1890 are liable to resumption for mining purposes on the terms mentioned below, whilst even lands granted before 1890 were liable to be resumed for mining purposes by the Crown on paying full compensation for the value, other than auriferous, of the lands and improvements so resumed (<i>see</i> Waste Lands Act, 1870, 34 Vict. (Tas. Stat.), No. 108, 54).	Any person mining on land belonging to a private individual without his consent subject to penalties. —(The Minerals Lands Act, 1884 (Tasmania), 47 Vict., No. 10.) Under the "Crown Lands Act, 1890" (Tasmania Stat. 1890, No. 8), s. 80, every grant deed of any Crown lands within a town or within the limits of any proclaimed goldfield, or of any lands withdrawn from sale or selection, is to contain a reservation to the Crown of the right to mine for minerals under such land at a depth of not less than 50 feet from the surface; but this section is not to apply to land purchased before the passing of the Act.

¹ Nearly all alluvial tin.

TASMANIA.

Under the "Crown Land Act, 1890," all lands selected or alienated under the provisions of that or any former Act relating to the sale of Crown lands may (but only within five years from the date of such alienation) be resumed for mining purposes by Her Majesty, on paying full compensation to the selector, grantee, or purchaser thereof for the value, other than that of gold or other minerals contained in such land; such value in case of disagreement to be ascertained by arbitration under the Lands Clauses Act (Stats. of Tasmania, 54 Vict., No. 8, s. 104).

Lands leased for grazing purposes may also be resumed by the Crown for mining purposes, on full compensation being made to the occupier for improvements (Stats. of Tasmania, 54 Vict., No. 8, s. 105).

The subject of gold-mining is dealt with by Regulations which came into force on the 2nd of August, 1887, and which are similar to those prevailing in the other Australian Colonies.

"The Regulation of Mines Act, 1891" (Stat. of Tasmania, 55 Vict., No. 31), consolidates and amends the law relating to the regulation and inspection of mines.

The whole law as to mining in Tasmania is proposed to be consolidated and amended by a Bill now before the Parliament, and intended to take effect as from the 1st March, 1894, and to be cited as "The Mining Act, 1893."

Import duties
on minerals and
manufactures
thereof.

Import duties are charged in Tasmania on various minerals and manufactures of minerals, *e.g.* :—

	s.	d.
Coal, per ton	3	0
Coke, „	1	6
Iron, galvanised and corrugated, per ton	40	0
„ bolts, nuts, and rivets, engine fittings, railway		
and tramway plant and rail, 5 per cent. ad val.		
„ girders, 10 per cent. ad val.		
Lead, milled, sheet, or piping, per cwt.	2	6

(“Aust. Hand-Book,” 1893.)

NEW GUINEA.

Name	Minerals	Ownership	Remarks
NEW GUINEA	Traces of Gold, Iron, Plumbago, Coal.	As in Queensland	By the British Guinea Ordinance No. 4 of 1888, the Queensland Statutes generally are adopted as the laws of this Colony; and by the British Guinea Ordinance No. 7 of 1888, the provisions of the Queensland Gold Mining Acts in particular are adopted. Under the British Guinea Ordinance No. 7 of 1890, s. 6, all Crown grants or leases are to contain a reservation of gold and silver, with right of access to dig for and remove same.

Table showing how minerals are dealt with in the various Colonies on Crown lands,

	NEW SOUTH WALES	QUEENSLAND	SOUTH AUSTRALIA
Minerals reserved on Crown Lands alienated . . .	All	Gold and silver	All
GOLD. Miner's Right, annual	10s.	10s.	5s. 10s. (in Northern Territory)
LEASES—			
Term . . .	15 years	21 years	21 years
Area . . .	25 acres	25 acres	20 acres
Fixed Rent . .	20s. per acre	20s. per acre	10s. per acre
Royalty . . .	Nil	Nil	Nil
MINERALS OTHER THAN GOLD. Mineral License, per ann.	20s.	10s.	20s.
LEASES—			
Term . . .	Not exceeding 20 years	21 years	Not exceeding 99 years
Area . . .	Not exceeding 80 acres	Tin, Silver, or Antimony, 40–80 acres, other minerals, 160 acres	Not exceeding 80 acres
Fixed Rent . .	5s. per acre	10s. per acre	1s. per acre
Royalty . . .	Nil	Nil	2½ per cent. on profits
LEASES, COAL—			640 acres
Area . . .	Not exceeding 640 acres	320 acres, and double that quantity in case of new discoveries	
Royalty . . .	Not less than 6d. per ton or more than 1s., usually 6d.	First ten years, 3d. a ton, remainder 6d. a ton, and 6d. per acre annual rent	...
Term . . .	Not exceeding 20 yrs. (renewable)	...	Not exceeding 21 years
VALUE OF MINERALS RAISED IN 1891—	£	£	£
Gold . . .	558,305	2,017,336	27,380
Silver and Silver Lead . . .	3,619,589	21,879	...
Coal and Shale . . .	1,855,429	128,198	...
Other Minerals . . .	621,687	141,947	240,416
Total . . .	£6,655,010	£2,809,360	£267,796
Population 1891 Census	1,132,234	393,718	320,481
Area in square miles .	309,175	668,224	914,780

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with statistics as to areas, population, and production of minerals in such Colonies.

VICTORIA	WESTERN AUSTRALIA	NEW ZEALAND	TASMANIA ¹
Gold and Silver	Gold and Silver	Gold and Silver	Gold and Silver
5s.	£1	10s., and 20s. if to mine on native lands	5s.
15 years (renewable)	21 years	21 years	10 years
Variable up to 100 acres	25 acres	Varies according to class of land; amalgamated claims not to exceed 30 acres	10 acres
5s. per acre	20s. per acre	3 yrs. at 10s., 2 yrs. at 15s., afterwards 20s. per acre	20s. per acre
Nil	Nil	2s. per ounce export duty (in North Island)	Nil
...	10s.	10s., and a further 10s. if to mine on native lands	10s.
30 years	21 years	Not exceeding 21 years	21 years
640 acres	40 to 160 acres	Not exceeding 640 acres	not exceeding 80 acres
5s. per acre.	5s. per acre	2s. 6d. per acre (merging in royalty)	Not less than 5s. per acre per annum
2 per cent. on value at Mine	Nil	$\frac{1}{10} - \frac{1}{20}$ of value	...
640 acres	640 acres	Not exceeding 2,000 acres	Not exceeding 320 acres
2 per cent. on value	6d. per acre and 3d. per ton for 10 years and 6d. per ton afterwards	3d. to 1s., usually 6d., and dead-rent of 1s. to 5s. an acre, merging in royalty	Not less than 2s. 6d. per acre per annum
Not exceeding 30 years (renewable)	Not exceeding 21 years	Term not to exceed 66 years	...
£	£	£	£
2,305,596	58,871	1,007,488	145,459
6,007	...	5,151	611,438
21,404	...	383,396	38,930
7,045	...	444,651	291,715
£2,340,052	£58,871	£1,840,686	£1,087,542
1,140,405	49,782	262,658	146,667
87,884	1,060,000	105,824	24,380

¹ The table relating to Tasmania has been revised from the Bill now before Parliament (*see* p. 305 *ante*)

² Exclusive of 41,993 Maories

CHAPTER XIX.

CHINA.

NOTE AS TO MINING LAW.

It is said that the western parts of China are probably richer in minerals than any other part of that country, and that they possess silver, iron, tin, and copper mines in many places, also precious stones; that iron and lead are found more or less in all the Southern Provinces; that mercury is obtained, and that there are several large coal-fields in the province of Kwang-tung. It is, indeed, understood that coal has been somewhat extensively worked in the island of Formosa for some time past, and that new collieries have recently been opened in the neighbourhood of Tientsin.

Owing to the great antiquity of the Chinese Empire, the authentic history of which can be traced back to over 1,000 years before Christ, and to the voluminous mass of Imperial edicts or decrees having still the force of law, except so far as they have been superseded by later decrees, which are stored up in China without any attempt at a digest, or even at methodical arrangement, it is said to be difficult to make any complete or reliable statement as to the legislation of China until within the last 250 years—that is, during the continuance of the reigning dynasty. It appears that in the time of the Emperor K'anghsi (1661–1772) all mining was forbidden, and until recently the Government steadily discouraged it on the plea that brigandage and disorder were likely to ensue from the assembling of large numbers of workmen in mining districts, and that to dig up the earth for precious metals was an incentive to avarice! In recent years, however, the attitude of the Central Government has been materially modified. As far back as 1869 the Board of Revenue published regulations for the control of mining operations throughout the Empire. These provide: (1) That before permission is sought from the Crown for the opening of a mine the Provincial Governor General or Governor

shall appoint an expert to examine its position in concert with the local officials and ascertain that no injury will be caused to the land, houses, or burial-places of the inhabitants; (2) that when a mine is exhausted an official report to that effect shall be made, and the mine then closed; and (3) that no mine shall be opened in remote places difficult of access. It is understood that these regulations have not been repealed, but that mining in different parts of the country is carried on under local regulations, adopted as occasion requires, which are submitted to the Crown for sanction. The following note, which has been prepared by a competent translator from the best original materials available in this country, without claiming to comprise the effect of all legislation, however ancient, which may still be in force, may at least be relied upon to give the general effect of recent legislation on the subject of mining in China, the precaution having been taken to ascertain by communication with that country that there has been no very recent legislation on the subject, beyond local regulations.

Report on China¹ by Mr. D. Goh.

There is no complete codified law in China to regulate the mining industry uniformly throughout the country. There have been, however, several regulations issued from time to time by the local authorities in the different districts. These regulations are framed in principle in accordance with Imperial decrees. Owing to the lack of materials for reference, it is almost impossible to investigate into the particulars of the mining rules of China in this country without collecting the existing regulations in force throughout that vast empire from their native land. But, so far as the general principles are concerned, the following points can be gathered from the book entitled "Kin-Ting Ta-Tsing Hoy-tien Tze-ri," or the "Historic and Comprehensive Description of the Administration of the Tsing Dynasty" (China):—

1. All minerals in China belong to the Sovereign, and no mine may be opened without Imperial sanction. A special feature of the Chinese mining industry is that it is rather the undertaking of the local authorities representing the Crown than that of a private enterprise, although, in practice, "merchants" are invited by the authorities to carry out the mining works with their own capital;

¹ Since the above note was prepared, the writer has been favoured by the receipt from China of a précis of the local regulations for Kwangtung issued by the Governor of that Province in 1886, which confirms the general correctness of Mr. Goh's report, but is too long to be set out here in full, but for extracts from which see p. 311 *post*.

in other words, mining in China, it appears, is permitted rather with the view of increasing the Government revenue than of assisting the national industry of the people. Consequently, the mining in China is under the administration of the Financial Department.

2. No mine is allowed to be worked should it be considered destructive to any neighbouring agricultural land, or dwelling-house, or cemetery. It is not infrequently the case in China that mines are closed by Imperial order on the ground of disorderly and riotous proceedings on the part of the miners.

3. When any mineral is discovered, the magistrate of the district (Chew or Hshien) has to ascertain whether or not the mineral is rich enough to pay the working expenses. Experimental operation is sometimes permitted by Imperial order for the period of two years. If the result is satisfactory, the magistrate, under Imperial order, invites "wealthy merchants" to take up the work of mining. Any "merchant" who desires to undertake the work has to go first to the office of the "Tow," or Lieutenant-Governor of the district, and exhibit such a sum of money as would be sufficient to carry out the work. After thus satisfying the Lieutenant-Governor, the merchant has to deposit the money with the magistrate, who issues a certificate against the deposit to the merchant. The magistrate then reports the case, stating the amount of the deposit, to the Viceroy, on whose grant the Financial Secretary of the province issues a license.

4. The Lieutenant-Governor has to give the magistrate a book, each sheet of which is divided into five continuous forms, in each of which the amount of daily output has to be inserted every day by the magistrate. One of the forms so filled up is to be cut off and sent to the office of the Lieutenant-Governor, one to be kept at the magistrate's office, and one to be given to the merchant. The remaining forms from the book are to be sent once a month to the Lieutenant-Governor for examination. Besides this, the magistrate has from time to time to report to the Viceroy and the Financial Secretary with regard to the progress and condition of the mining and the state of the finance and revenue.

5. The daily output has to be stored away, and at certain intervals it is to be smelted under the joint superintendence of the official and merchant. The quantity thus obtained is to be entered in a stock-book each time, and the counterfoils of the book are to be kept respectively by the official and merchant.

6. A merchant may be allowed to undertake the mining of several mines, providing that such mines adjoin one another. As

to mines which do not adjoin, each merchant is allowed to undertake only one such mine. This restriction is imposed in order to secure a better control over the miners.

7. Should any merchant find his work unprofitable, or be unable to continue his undertaking on account of want of capital, he is to be allowed to withdraw from his undertaking. Another wealthy merchant may be invited to succeed to the work, and the retired merchant has no right to claim any mineral obtained after his withdrawal.

8. The system of levying mining dues varies considerably according to the different minerals and mines. The workers of metals used for coinage purposes, such as gold, silver, and copper, are required to contribute a certain quantity of the metals themselves, the percentage varying from 30 per cent. to 40 per cent. of the output. In the Western Provinces the miners of gold sand are required to pay a fixed weight of gold per day or per month each. As to other minerals, the merchants are required to pay 20 to 50 per cent. of the proceeds to the Government Treasury.

9. The book before referred to does not appear to contain any passages with reference to the relations between landowners and mineowners, or between masters and miners.

10. Foreign engineers are employed at several mines, but no foreign miner is allowed to work in Chinese mines.¹

¹ In explanation of what is here stated, it will be seen from the following extract from the Kwangtung Mining Regulations before referred to that expert foreign workmen would not be wholly excluded:—

“Mines have often proved a failure in China from want of skilled advice. Success will be assured if foreign workmen are engaged to indicate the seams and use machinery for extracting the metals. It is intended, therefore, as by the regulations for the Kaiping mines in Chihli, to permit the lessees of mines to engage foreign workmen. The agreements with them must contain a stipulation that they are only to look after the mine and are not to interfere in politics.”

On the other hand it will be seen from the following extract from the same regulations that foreign capital is intended to be wholly excluded:—

“As in the case of the China Merchants' Steam Navigation Company, no foreigners will be allowed to hold shares in mines. . . . It is also forbidden to mortgage or sell the shares to foreigners, or to foreign companies; shares so transferred will be cancelled.”

It appears from a letter of the Secretary of the British Iron Trade Association to the principal Chambers of Commerce throughout Great Britain which has recently been published, that the importation of machinery into China has been prohibited, but that representations have been made through the Foreign Office to the Chinese Government that this appears to be a violation of the Elgin and other treaties with China, under which the importation of goods into that country, not otherwise specifically mentioned in the tariff, is to be permitted under the general *ad valorem* clause, on payment of a duty of 5 per cent. on their declared value, at the treaty ports.

11. Further information in respect of the more modern regulations might be obtained if inquiries were made in China at mines actually working at the present time, *e.g.*, the Tang-Shan Coal Mining Company in Chihli Province, and others.¹

It will be seen from the above report that the system of mining law in China is of the "domanial" type, the mines being **General** held to be the absolute property of the Crown, which **remarks.** deals with them rather with a view to the direct financial return than to a general encouragement of the mining industry. This is in accordance with the general principle of the Chinese law, which recognises the Emperor as "Father of the National Family," in whom all property is primarily vested. It may at least be open to question whether such a system, coupled with a policy of exclusiveness towards foreigners, is likely to lead to any extensive or speedy development of the undoubtedly great mineral resources of the country.

¹ The Kwangtung Regulations also provide for the mining being carried on under strict official supervision, and contain very special provisions as to the engagement of and for ensuring good behaviour amongst the workmen.

CHAPTER XX.

JAPAN.

NOTES AS TO MINING LAW.

THE mineral resources of Japan are known to be very great, gold and other metals having been worked from a very early period, and the working of coal having been extensively developed in recent years. The total export of coal from Nagasaki in the year 1891 amounted to 474,194 tons, valued at £325,691, and from other parts to 599,228 tons, valued at £302,007.¹ Copper has also been extensively worked about twelve miles from Nikko;² and until a few years since, when superseded by the introduction of American oil, petroleum was worked successfully in several parts of Japan;³ indeed, of late years the output of petroleum has grown again considerably, having increased from 290,699 gallons in 1885 to 2,017,116 gallons in 1890.⁴ The following extract from a work recently published in Japan attests to the great importance of the country from a mineral point of view:—

“The mineral wealth of this country as now known is something enormous. The coal in Hokkaido and Kiushu, antimony in Shikoku and Kiushu, and gold, silver, copper, and iron in these and other provinces, seem almost inexhaustible. Copper, which has been produced in immense quantities from ancient times, ranks first; gold and silver stand next; while coal, antimony, manganese, and sulphur, which are now being exported, follow.”⁵

The history of the written mining law of Japan may be said to date from the Restoration in 1868. Previous to that date many mines appear to have been owned by private persons, but it is understood that the Government about that time bought up all mines which did not then already belong to it; thus in 1873, when the new mining

¹ British Consular Report, No. 1,098 of 1892.

² *Engineering and Mining Journal*, New York, Vol. LIV., p. 128.

³ “Transactions of Federated Institute of Mining Engineers,” Vol. III., p. 698.

⁴ “The Mining Industry of Japan during the last 25 years, 1867–92,” by Wada Tsunashiro, published at Tokio, 1893, p. 9.

⁵ Ditto

ditto

ditto.

law was first promulgated, the Government took the Takashima colliery into its own hands, after paying some 360,000 dollars for it.¹ The law of 1873 appears to have been merely tentative, and bore a strong resemblance to some of the laws relative to mining on Crown lands in the Australian Colonies, from which it was, no doubt, to a great extent adapted. The experience of seven years, combined with a great development of mining, especially for coal, led to the passing of an elaborate and well-considered law in 1890, which came into force on the 1st of June, 1892, and repealed the law of 1873 as from that date. The following short references to the provisions of the law of 1873 may, however, still be of interest, at least for the purpose of illustrating the alterations which have been made by the later law :—

Under the law of 1873 all minerals (except building materials and substances useful for the cultivation of the soil, which the owner of the surface might dispose of at his pleasure), were declared to belong to the Government, which was to have the sole right of working them, or of letting them to be worked under agreement by others. Rights to search might be granted, available for a year, and renewable, the owner of the surface having a preferential right to the search, provided that he was able to undertake it; the person making the search was not, however, entitled to work minerals except by special permission, nor does he appear to have been entitled to a right of working preferentially to other applicants. Leases might be granted to any Japanese subject by the State to work and dispose of minerals in mining setts of about 1,500 square yards each for a period of 15 years; but they were liable to forfeiture (1) if any foreigner obtained an interest in the undertaking, (2) if the lessee had not executed certain specified works within a year, (3) if the lease were transferred to a third party without the formal authority of the State, and (4) in case of failure to obey the official instructions as to drainage, or of the mine being allowed to get into an irreparably damaged state.

The worker of mines was entitled to take all land necessary for his working by a specified method of procedure, subject to making compensation for damage caused to the surface. Provision was also made for mutual easements of ventilation and drainage between adjoining mines, subject to payment of proper compensation; and the law provided for the establishment and maintenance of general galleries, as is common under the Spanish-American laws.

Under the law of 1873 the worker of a mining sett had to

¹ "The Mining Industry of Japan," *u.s.*, p. 285.

pay annually to the State a fixed tax of about 10s. per acre for metalliferous mines other than iron, and of 5s. per acre for all other mines, and a royalty tax of from 20 to 30 per cent. on the gross produce, fixed in each case, according to circumstances, by the mining authority; but the enforcement of so heavy a tax was necessarily impracticable, and it is understood that after two years from the passing of the Act it was not in fact attempted to be levied.

Existing Mining Law.—The existing mining law of Japan (No. 87 of 1890) came into force on the 1st day of June, 1892, as from which date the law of 1873 was to be repealed, but permissions to explore or work mines granted before that date were to continue in force.¹

The law of 1890 declares that any mineral not mined shall belong to the State, and defines minerals as consisting of gold, silver, copper, lead, tin, antimony, mercury, zinc, iron, sulphate of iron, manganese, blacklead, coal, sulphur, and petroleum (Art. 2).

The law declares (Art. 3) that no person except the subjects of the Empire shall be a mine-owner or a member of any association relating to mining industries, or a shareholder of any mining company in the dominion of the Empire.

In the case of mine-owners under disability through infancy, lunacy, &c., a guardian must be appointed (Art. 3), who is liable to penalties if the person whom he represents commits an offence against the Act (Art. 88).

Officials in the Mining Bureau of the State Department for Agriculture and Commerce, or in any District Mining Superintendence Office, are prohibited, so long as they are in the service, from being mine-owners or interested in mining undertakings (Art. 4).

Mine-owners who have had their licenses withdrawn are prohibited from applying for one year for fresh licenses in the same mining area (Art. 5).

Mining partnerships must be represented by a principal, whose name must be reported to the District Superintendence Office (Art. 6).

Where land owned by another person or persons is required to be surveyed for mining purposes, the person desiring to make such survey must obtain permission in writing from the

¹ A translation of this mining law, which is probably the only English translation in existence, was obtained by the author through the courtesy of the Japanese Secretary of Legation in London.

District Mining Office, upon production of which the owner of the land must permit the survey to be made on being indemnified against any damage caused by the survey (Art. 47).

Mine-owners may also require leases of land (with certain restrictions as to buildings, &c.) to be granted to them for mining purposes at reasonable rents, but must not enter the land without paying a deposit based on the land value registered in the official land ledger.¹ The owner of the land must also be indemnified against any injury to the land. When the occupation has been completed and the rent paid, the deposit money must be refunded in exchange for the land. At the end of the occupation the lessee must also make good all damage done to the land, or, where that is impossible, pay compensation for such damage. Where adjoining land is damaged through the occupation, the owner may require the mine-owner to buy or lease it. If the occupation is likely to last for more than three years, or has in fact lasted beyond that period, the owner may require the mine-owner to buy it.

Where the owner and mine-owner cannot agree as to the terms of lease or amount of rent, deposit, or indemnity for damage or value of land, the parties may apply for the decision of the Chief Superintendent of their district. Should either party be dissatisfied with such decision, he may appeal to the Minister of Agriculture and Commerce in certain cases, and to a judicial court in other cases; but the mine-owner may obtain possession, notwithstanding an appeal, on paying down the sum awarded by the Chief Superintendent of the district, or depositing the same in the manner prescribed (Arts. 47-57).

Every mine-owner must pay 1 per cent. of the value of mineral mined as *royalty tax* (payable before the 31st March in each year for the preceding year), and 30 sens² per of mines. 1,000 tsubos³ of the mining areas (payable before the 15th December in each year for the following year) as *mine tax*. Mining areas of less than 1,000 tsubos are exempted from the mine tax, and iron mines appear to be exempted from the royalty tax. The value of the mineral mined is declared by the Minister for Agriculture and Commerce, basing it upon the average price prevailing in the principal markets. Should there

¹ This register contains a valuation of all land for taxation purposes; and is a test of the amount of deposit, but not necessarily of the ultimate rent to be paid, which is based on the actual market value of the land.

² Thirty sens = about one shilling.

³ One thousand tsubos = about 4,000 square yards.

be no such market price, it is to be based on the actual proceeds (Arts. 73-5).

Permissions to explore for minerals may be obtained from the District Mining Superintendence Offices on applications made in writing, accompanied by a plan of the land intended to be explored. These licenses are only available for one year, but may be extended by the Chief Superintendent of the district after inquiry. Minerals obtained in the course of the exploration may also be sold by the permission of the Chief Superintendent, in which case 1 per cent. of the value obtained by the sale must be paid to the Government (Arts. 8-11). These licenses to explore may be withdrawn by the Superintendent of the district if found to be injurious to the public interests (Art. 19), or to have been obtained by false pretence or mistake (Art. 33), subject to an appeal to the Administrative Court.

Mining Operations.—Any person desirous of working minerals may make a written application for a license, accompanied by a plan, addressed to the Minister of State for Agriculture and Commerce, and transmitted through the District Mining Superintendence Office; but if the application and plan cannot be sent together, the latter must be sent afterwards within a period of fifty days, under risk of the application becoming void. The applicant must be prepared to prove that the substance which he proposes to mine exists in the land for which he has applied, and the Chief Superintendent of the district has the right to satisfy himself, at the expense of the applicant, that such a deposit in fact exists (Arts. 12-14).

All applications for licenses, either for explorations or mining operations, must be registered, and where there are several applications priority of date is to prevail; whilst if there are several applicants of the same date for the same mining area, sixty days' time is allowed for them to negotiate and determine amongst themselves which applicant is to be preferred, and, if they cannot agree, all the applications become void (Art. 15). The Minister of State, however, seems to have a discretion as to the granting of the license, as he is only to issue it to a fit and proper person; nor is the application to be granted where it is regarded as injurious to the public interests (Arts. 17, 18).

Mining Areas.—The boundary of a mining area is to be fixed by straight lines on the surface, which also limit the perpendicular area underground. The extent of a mining area is not to be less than 10,000 tsubos¹ in the case of coal mines, or 3,000 tsubos in the case of other minerals, and neither

¹ One tsubo = about four square yards.

are to exceed 600,000 tsubos; but boundaries may be altered with the consent of the Minister of State for Agriculture and Commerce (Arts. 41-4).

Sales and transfers of licenses. The privilege of a mining operation granted to a licensee may be sold, transferred, or mortgaged, but the transaction must be registered at the district office (Art. 20).

Conditions of mining operations. No explorations or mining operations are to be carried on within a radius of 300 ken¹ from imperial palaces, temples, graves, military or naval forts, ports or gunpowder factories, with some exceptions, where the necessary permission can be obtained, nor within the radius of 30 ken, both surface and underground, from railways, tramways, public roads, rivers, lakes, embankments, ponds, temples, cemeteries, public parks and buildings, without the consent of the proper authorities or owners; but such consent is not to be withheld if there is no apparent danger (Arts. 24-5).

Every mine-owner is to prepare and submit in each year a working plan for the following year for the approval of the Chief Superintendent of the district before the 30th October in the previous year, or, in the case of the first year, within three months from the date of the mining license; and the Chief Superintendent may require the plan to be altered if it appears dangerous to the safety of the mine, or not suitable to the mining area; and the work must only be carried on in accordance with the plan (Arts. 27-8).

Every mine-owner is to prepare two copies of his working plans, presenting one to the district mining office, and keeping the other himself, and making additions every six months to the plans, showing the progress of the work. If necessary a mine-owner can obtain particulars of the workings in neighbouring mines through the Chief Superintendent of the district, at his own expense (Art. 31).

Every mine-owner is to make an annual report in January of each year as to the output of mineral and manufacture thereof, the amount of sales, the selling prices, number of working days, and number of hands employed at his mine during the preceding year (Art. 34).

Every mine-owner must keep a book in the prescribed form, and enter therein particulars as to output, manufacture, selling price, &c. (Art. 40).

Union or division of mining areas. Mine-owners may amalgamate or divide the mining areas granted to them, with the permission of the Minister of State for Agriculture and Commerce,

¹ One ken = about two yards.

and with the written consent of their creditors where the mines are mortgaged; but no united areas are to exceed the limit for which mining areas might be originally granted.

Forfeiture or withdrawal of licenses. The Minister of State for Agriculture and Commerce may withdraw mining licenses in the following cases:—

1. In case the mining operation should at any time be found injurious to the public interest (Art. 19).

2. In case the mine-owner should fail to present, within the specified period, an annual working plan or its revised plan (Art. 28).

3. In case the mine-owner should fail to commence to work, or should afterwards cease to work, for the space of more than one year (Art. 29).

4. In case the Minister of State for Agriculture and Commerce should discover that the license has been obtained by false pretence or mistake (Art. 34).

5. In case the Chief Superintendent of a district should find any difference between the conditions and situation of a mining area applied for and those of the actual bed of a mineral for which the license was granted, and, considering it injurious to the interests of the mineral, he should order the mine-owner, with the consent of the Minister for Agriculture and Commerce, to alter his plan within sixty days, and the latter should not have complied with the order (Art. 43).

6. If any mine-owner should fail to pay the royalty tax and mine tax within the specified period (Art. 76).

In all the above-mentioned cases the mine-owner has a right of appeal from the Minister to the Administrative Court, after receiving notice of the withdrawal.

Surrender of licenses. When a mine-owner closes his work he must report the fact to the Mining Superintendence Office of his district and return his license (Art. 37).

Rights of mort-gagees. Where licenses have been withdrawn or surrendered the mortgagees may lose their rights, but are entitled to claim to have licenses granted to them, if applied for within sixty days, except in the cases of forfeiture numbered 1 and 4 above (Art. 38).

Mining Administration.—There is a very complete system of mining administration in Japan, at the head of which is the Minister for Agriculture and Commerce, who exercises his power through the Chief Superintendents of the districts. He has also to exercise police supervision, with the view of preserving the workings in mines, of protecting lives in and the sanitary condition of mines, and of protecting the surface of the ground, and the Chief Superintendent of a district may stop the

working of a mine if he considers the operations dangerous to lives or injurious to the public interests; but, except in cases of extreme urgency, he is not to exercise this power without the consent of the Minister. If a mine-owner fails to execute works required by the Chief Superintendent, the latter may have the works executed at his cost (Arts. 58-62). Power is given to the Minister for Agriculture and Commerce to issue mining police regulations and other regulations for the practical carrying into effect of the Act, and it is understood that such regulations (embodying forms of application, &c.) were issued in March 1891 (Arts. 63 and 92). An ordinance has also been put in force regulating the mining administration.

The Act provides for the drawing-up of bye-laws by mine-owners relating to the employment of miners by them, subject to the approval of the District Mining Superintendence Office. In the absence of special contracts between mine-owners and miners, either party may terminate the engagement by giving the other a fortnight's notice; but mine-owners may at any time dismiss miners in certain specified cases of misconduct, incapacity to work, or suspense or discontinuance of the mining operations; whilst miners may at any time leave their employment in certain specified cases of ill-health, maltreatment by the owner or his managers, or non-payment of wages. Owners must give certificates to any discharged miner, stating the period of his last engagement, his condition, rate of wages, and reason for discharge. Wages must be paid in currency and not in kind, except at the miners' request. Mine-owners must keep registers of workmen (Arts. 64-70).

Miners' Relief Fund.—Mine-owners are required in the case of any miner injured in the course of his employment, and not through his own fault, to make certain provisions for him during the period of his disablement and for his family (if any) in case of his death (Art. 72).

Penalties.—The law provides for the infliction of fines in varying amounts on persons infringing its various provisions.

It will be seen that one of the special features of the Japanese law is the care which it takes to prevent foreigners from becoming owners of mines, and it is understood that the objection extends to the employment of foreign labour or capital in mining. It is, however, also understood that the employment of foreign mining engineers and managers is not objected to, subject to the special permission in each case of the Government. This exclusive policy, as also the absence of security for mining titles, combined with somewhat excessive State control, which is apparent in Japanese mining law, has

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been a common feature in the early history of mining legislation in many countries which have since come to acknowledge that the best way of developing their mineral resources, and of reaping the benefits to be derived therefrom, was to be found in encouraging the employment of the best mining talent and the most skilled mining labour, and the free investment of capital by all who might be able and willing to risk it, irrespective of nationality. Enlightened ideas are known to be now prevailing in Japan, and it may be hoped that the day is not far distant when, under future treaty obligations, the magnificent mineral resources of that favoured country will be thrown open to the mining enterprise of the world.

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